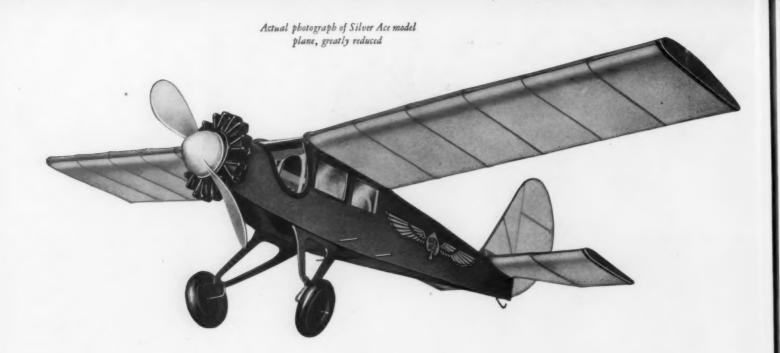
The

August, 1929

YOUTH'S CONION



In This Issue Alfred F. Loomis Ralph Henry Barbour Keith Kingsbury Pringle Barret Jonathan Brooks Harry Irving Shumway and Others



Colonel Lindbergh Never Had a Plane Like This!

But You, Companion Reader, may have it to build and fly for the asking

ERE'S just about the greatest chance that has been offered to model airplane enthusiasts since Lindbergh flew the Atlantic. Would you like to own the magnificent Silver Ace Monoplane pictured above? It has a wing spread of thirty inches—almost a yard—and a powerful motor that will drive it soaring through the air for eight hundred feet—more than the length of a city block! Would you like it? Then it's yours!

Read about this great offer and then send immediately for full particulars explaining how easily you may become a proud possessor of the Silver Ace.

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Just Like a Real Monoplane

The wonderful Silver Ace plane is an accurate model-size copy of the type of completely enclosed cabin passenger-carrying monoplane now in service all over the United States. It is a speedy, sturdy flyer, and constructed so that no crash will damage it. You can build it from the full set of parts and the clear directions we supply you. It will take but a short time to build—and the building is just as much fun as the flying.

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Here's the chance of a lifetime. Be the first in your community to own a Silver Ace. Better act quickly. Clip the coupon while it's handy.

THE YOUTH'S COMPANION-

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AUGUST, 1929

NUMBER 8



The Desire staggered under such a cloud of canvas as three, at least, of her crew had never seen before. Broken water fell away from the how, alternately whispering and roaring. With the advancing day the wind had built up, and the bulging sails strained at their mighty work, while the rigging hummed

Shanghaied

T the noon hour Luke Fernald and Jerry

Bigelow lounged on the forward deck of the schooner yacht Desire and drank in the sights and sounds of their first foreign port. With a dozen bells in thirteen keys jangling the call to a week-day mass there was sound enough to fill the deafest ear; and when the bells quieted one by one there were cries from near-by boatmen and melancholy street calls to punctuate the startled silence. Under the hot summer sun the brightly tinted houses of Ponta Delgada dazzled the eyes, but intermittently across the colorful stucco marched the blue shadows of cumulous clouds. Around the yacht which the two American boys had helped sail to this island city of the Azores, lingered bumboatmen, ready at the flick of a finger to offer sweets and fruit for sale, or to row anybody ashore for a silver dime. or to row anybody ashore for a silver dime.

By Alfred F. Loomis

ILLUSTRATED BY COURTNEY ALLEN

"Looks good to me, Jerry," said Luke, presently. "I don't think we made any mistake signing on as paid hands for this cruise. There's adventure in the air." Luke's forehead was wide and his chin angular, and there was the hint of thoughtfulness behind his greenblue eyes. His body was slight, but nobody who had seen him, as Jerry had, perform seemingly impossible repairs in the swaying rigging seventy feet above deck would have thought him lacking in strength or the determination to use it.

Luke's friend was a sailor through and through; thick through and wide in the shoulders for his eighteen years. Jerry's eyes, which were of a deep-blue shade, might seem momentarily vacant when he was confronted

with a new idea, and his round face was not re-sponsive like Luke's. But when Jerry had bitten into a thing, as he had bitten into sailing as he had bitten into sailing almost from his cradle, no sudden emergency could catch him unawares. Luke said—he may have been quoting—that at sea experience overshadows age. At any rate, Jerry had the experience experience.

The Long · Story · Complete + in + This Issue

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He stretched lazily as Luke spoke, the hot sun feeling good to his bare arms and shoulders. "I like the sound as well as the looks, now that those cracked bells have knocked off," said he. "First time I heard 'em last night I thought the old burg was burning up. Say, Luke, d'you see that bumboatman out there with the clay pipe in his mouth?

in his mouth?"

"Yes, the one that brought those cops aboard this morning for the captain and the boatswain."

"Well, he looks native. But he's an Irishman from County Galway. A fact. Told me so himself."

"I'd never have thought it. He's dirty enough to have lived here all his life."

"Just shows," said Jerry, "that when you're in a foreign port you can't believe your eyes. And, Luke, do you think those cops arresting our officers were on the level?"

When both boys had looked toward the Irish bumboatman he had leaned on his oars to come nearer, but at a signal from Luke he had sunk back to the stern thwart of his rowboat, half asleep but ready for business. Answering his friend's question, Luke said:

Answering his friend's question, Luke said:

"I've been thinking about them all the morning, and this is what I've doped out. Both the captain and the boatswain are Portygees from here—San Miguel. They've made their pile in the States and they shipped on the Desire to come home free. Well, now they're here they fix it up with the police, and what can the American Consul do about that? Nothing. Just let 'em go and try to get us two men that would like to ship to the States."

"If you're right," said Jerry, after a moment of reflection, "I see where we stay here a long time waiting for more officers. They don't grow on every piece of seaweed. We won't get to Funchal in a

"We could get home without extra hands if those loafers in the after guard would work. Honest, Jerry,

I don't see how they could watch us sweating our hearts out on the way over and never lend a hand."
"They'd get calluses, I guess. Look, here comes Lily-

white, now

As Jerry spoke a youth of about his own age emerged carefully from the cabin companionway. He was clothed in a neatly pressed suit of the finest pongee with white in a neatly pressed suit of the finest pongee with white buckskin shoes over his silk-stockinged feet, and on his head a Bangkok har tethered by a silken cord. His untanned face, as he turned and looked forward, had an expression of boredom which seemed to say without words that Roger Livingston, of New York, U. S. A., couldn't be expected to find anything worth his while in Ponta Delgada

The immaculate Roger raised his carefully modulated voice and called down the companion: "Come if you're coming, Ted. There's nothing to see, but we can at least get off the boat."

get off the boat."

"Oh, all right," boomed a voice from below. "I can't find my hat, and my shoes aren't mates."

Jerry liked that voice, even though Ted Stinson (Mister Stinson, if you please) was the laziest, most worthless soul he had ever seen on a yacht, fore, aft, or amidships. On the rare occasions when young Stinson had seen fit to leave his bunk and hoist his hulking frame on deck during the passage over he had invariably lain down on the main sheet or blocked a gangway or otherwise made an object or blocked. sheet or blocked a gangway or otherwise made an obstacle of himself. Now, after another minute's delay, he appeared hatless, his fine clothes hopelessly wrinkled and his shoes decidedly mismated, since one was brown and the other black.

Lilywhite stepped to the yacht's starboard rail and waved a languid hand to the hovering boatmen. Half a dozen of them lunged at their oars and raced to the gangway, but it was the one Jerry had called an Irishman who got there first and received the yachtsmen.

Because Jabez O'Reilly, naturalized Azorean, wanted to take in what this queerly assorted pair would say to

each other on the trip to the landing, he made no sign that he understood English, but plied stolidly at his oars

A LITTLE later, when Luke and Jerry, their noon hour finished, were busily reeving off a new forestaysail halyard, Jabez brought his boat to the bow of the Desire, tied its raveled painter to the bobstay, and clambered laboriously aboard.

"Lads," said Jabez, "I'm a poor man, and ye'll see without lookin' that the riggin' of me boat ain't what it oughta be. What'll you take for that old piece of rope?"

As he spoke he picked up a hight of the halyard and

oughta be. What'll you take for that old piece of rope?" As he spoke he picked up a bight of the halyard and parted the strands with his blunt fingers. "Look," he went on, "'tis practic'ly no good at all. All the stren'th gone out of it, and 'twould be folly to use it on a fine ship like this."

"So I thought, and that's why I took it off," said Jerry. "But I can't give it to you. It belongs to the ship."

ship."

Evidently the bumboatman's mind was prepared for this refusal. "Would ye now," he wheedled, "swap it for a piece of news that's worth something to your grand

for a piece of news that's worth something to your grand big ship?"

This wasn't seamanship, and Jerry thought the question over while Luke answered it. "Let's have the news, and we'll see if it's worth it."

"I'll trust your honor, lads," said Jabez without further bargaining. "Your captain and the bos'n ain't actually arrested."

Luke flashed a glance at Jerry. "Told you so," said he. And to the Irishman: "We doped that out. Your news has got to be new if you want the halyard."

"This is new," returned Jabez confidently. "You saw me row thim two young gents ashore? Well, on the way in the sissy says to his big murthering friend that it was costing a pretry penny to shanghai the Portygees ashore, but 'twas worth it. So, having nothing better to do, I follied thim, and saw thim get into a big touring car



Roger seized the rope. "He'll get my legs!" he cried. But Luke and Jerry heaved, and he left the water. Leaning over, Jerry seized one wrist. Up the imperiled boy came. But the shark came faster

with the captain and bos'n and with the two gendarmes and drive like sin toward Furnas, pigs, chickens and ould women jumpin' out of the way for dear life. There, do I get the rope?"

It's yours," said Luke, picking up the discarded coil and tossing it into the waiting bumboat. do you think they shanghaied them for?" "Now, what

do you think they shanghared them fore
"They's a steamer for New York due in here tomorrer,
and I heard the young gents mention her name. But
what would I know about that?" asked Jabez.
"A mighty good question," said Luke. "Anything

else on your mind?"
"No," said the Irishman, starting toward the bowsprit. "I'll be cuttin' along with me rope. They's a
gentleman ashore I'll be after seein'."

CHAPTER TWO

Captain Jerry

THOUGH Jerry and Luke had no inkling of it, the "gentleman ashore" was Cyrus J. Dyer himself, owner of the Desire, and guardian of Roger Livingston. He had left his yacht after lunch and repaired straightway to the office of the Consul, there to inquire of his old friend Timothy Westford what to do in the matter of the arrested ship's officers.

The two Americans had known each other in various ports of the world where on different occasions the

ports of the world where on different occasions the yachtsman had found his way and where Westford had

yachtsman had found his way and where Westford had been employed in the consular service. Hence at the announcement of Dyer's name Westford threw other cares aside and greeted his old friend with enthusiasm. "Traveling again," he cried, throwing a pile of trade magazines off a wicker chair and pushing the tall, elderly Dyer into it, "and finding me again in the capacity of nursemaid to infant American industries. What brings you to these islands?"

Mr. Dyer fanned himself with a large handkerchief and

Mr. Dyer fanned himself with a large handkerchief and gazed abstractedly at a framed portrait of Abraham Lincoln which graced the wall behind the Consul's desk. Like all portraits of Lincoln in all the Lincoln which graced the wall behind the Consul's desk. Like all portraits of Lincoln in all the American consulates of the world, this one was fly-specked and slightly stained by dampness. It had such a familiar look that the owner of the Desire straightway felt at home.

"Why," said he, after a moment, "I'm here as a

matter of friendship to my old friend David Living-

'Oh, yes, Livingston. I remember him. Big mining gineer. But I thought he was dead."

on, yes, Lavingston. I remember him. Big mining engineer. But I thought he was dead."
"He is, but he made me guardian of his son Roger. The boy is seventeen now, and, Tim, I've got a great big job on my hands."

Mr. Westford raised a questioning eyebrow, and his friend went on. "Just between you and me and old Abe, he's the world's most awful snob and ne'er-do-well. he's the world's most awful snob and ne'er-do-well. Hard work was what made the Livingston money, but hard play is what's going to spend it. I thought a few weeks ago that if Roger shipped with me on a long cruise and came face to face with reality he'd find that a silk undershirt doesn't make a man. But what happened? A smooth passage so far, and Roger spending all his time in a deck-chair reading stupid trash and bored half to death."

A grunt was Mr. Westford's immediate response to this dismal information. Then he said, "Who else in your party? Anybody to offset this miscreant son of Dave?"

"More of the same brood—his friends from prep school. Ted Stinson was included in the invitation, and he came along, thinking it a chance to get a good long rest after his arduous studies with a golf ball. And, by George, he was right. In the last three weeks he's hardly ever left his bunk. No amount of sarcasm from me has shamed

his bunk. No amount of sarcasm from me has shamed him. He hasn't an ambitious bone in his body."
"Why didn't you bring them on a crewless boat, where they'd have to work?" asked the sympathetic Consul.
"Well, I'm not as young as I used to be," said Dyer, gloomily. "The third member of our party is a bright and particular star named Budge Hale. Thinks he's register to have not and only becomes conscious of the

going to be a poet, and only becomes conscious of the Desire at all to find inspiration for a poem."

"I heard," said the Consul, "that your captain and bos'n had been arrested. That's almost the last straw, isn't it, C. J.?

"Yes," said Dyer, sitting up straight in his chair, and gripping its creaking arm. "That's why I came ashore. My ship is part of the United States, and by what right do a couple of Spik police come aboard and arrest my

do a couple of Spik police come aboard and arrest my crew?"

"I knew you'd ask me that," said the Consul, "and I've been making inquiries. But I've found no grounds for their arrest. Instead of wasting your time looking for them you might better ship a couple of others."

C. J. got up and strode angrily up and down the narrow office. "If I were ten years younger," said he, "I'd try to sail the yacht home myself. But I guess I'll have to let you find some men."



"Come with me," said Jerry. To clinch the matter he seized the rebellious Roger by his shirt collar and dragged him through the doorway and toward the ladder

But Jabez, having bigger rewards in mind, forestalled his intention. "Tis no charity I'm askin of Y'r Honor," said he. "But could I sell you a bit of news that's worth somethin to your grand big ship?"

A cautious nod from Dyer and Jabez was off, happily conscious that his second audience was no less interested these the force.

than the first.
"So there's five dollars for your news," declared Dyer,

"So there's five dollars for your news," declared Dyer, as Jabez brought him to the yacht's gangway, "and it's well worth the money. Anything else I can do for you?" "Well, sor," said Jabez, "I don't want to be forward-like, but I notice the two young lads is just reevin'offa new jib halyard. Would ye be thinkin' they could spare the ould one to a poor boatman?" "They can indeed," said the owner of the yacht, slowly mounting the gangway. "Jerry, give that old jib halyard to this man, and then come below to my stateroom." Jerry, who had stood by the gangway to welcome the owner aboard, suppressed a grin and ran forward, returning with a coil of line as big as the one that had already been presented to the Irishman. "You're a fast worker," said Jerry, tossing the line into the boat. "Better shove off before I tell the owner about that other halyard."
"Didn't I save you the difficulty of tellin' tales on the

"Didn't I save you the difficulty of tellin' tales on the young gents?" asked Jabez complacently. "When you know me better, me lad, ye'll see what a friend I can be." "If I know you any better," returned Jerry, starting down the after companionway, "you'll have all my halyards' and the sails as well."
"My halyards' had been a slip of the tongue, and as the

yards and the saus as wen.
"My halyards" had been a slip of the tongue, and as the young sailor knocked at the open door of the owner's stateroom he said to himself, "What do you think you are, captain of this packet?'

HIS question, asked in self-reproof, was surpris-ingly answered by Mr. Dyer. "Come in, captain," said he, "and shut the door behind you. I want to

This question of the severely furnished but talk about the voyage home."
In a daze Jerry stepped into the severely furnished but majoritable stateroom and closed the door. "Captain!" and if so could be hold down the jobs.

Dyer chose to keep the boy in suspense as he asked, What previous experience have you had in sailboats?"
"Been on them all my life, sir. A small yacht of my

own-you could hardly call her a yacht she's so little-

coastwise schooners, and fishermen. This is the first time I've been on a sixty-footer like this."

"Did you tell me when you shipped that you intend to follow the sea for a living?"

"No, sir. Luke and I are working our way through college, and this cruise sounded like good fun and good money besides."

money besides."

"Mmm. It's been rather tame so far, but we may have some fun later on. Do you think you could handle the Desire in a gale of wind?"

The height fort besitting between between

Desire in a gale of wind?"

The boy shifted feet, hesitating between natural modesty and the inner conviction that his seaman's intuition would see him through a crisis. Then said he: "Who would I have to help me, sir? Would you get a couple of seamen from the beach?"

Jerry noted that while Mr. Dyer lowered his voice to reply he bit off his words in anger. "Now," said he, "we're coming to the crux of the matter. My Portuguese captain and host swain were not attrested by the police.

My precious ward had them shanghaied ashore."
"Yes, sir," was Jerry's quiet reply.
"Do you say that to be polite," snapped Mr. Dyer, interrupting himself, "or were you in the plot?"
"No, sir. That Irish bumboatman sold me the news

"No, sir. That Irish bumboatman sold me the news for an old halyard. Not the jib halyard, but the forestaysail." Despite the gravity of the situation Jerry laughed, and Mr. Dyer smiled with him.

"What were you going to do with the information?"
"We—that is, Luke and I—didn't know. We didn't like to tell on your ward."

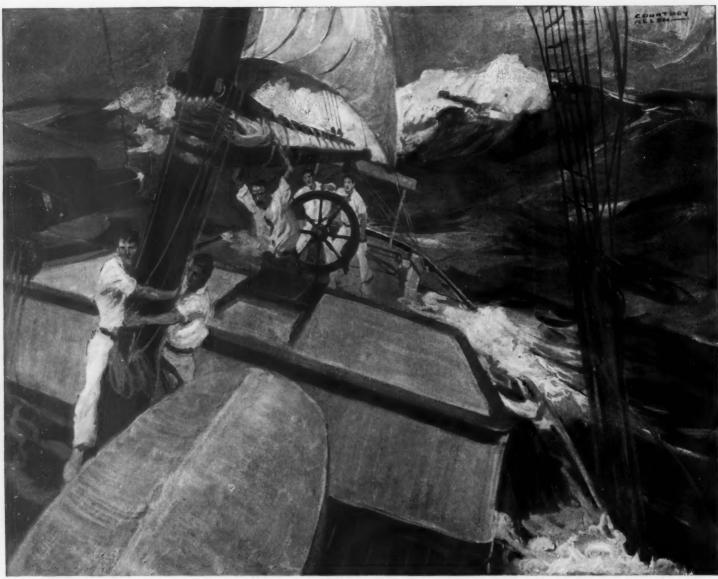
"I admire your scruples. You ask me who will help you work the ship. Well, Luke will be your mate, and my ward and young Stinson will be your crew, aided perhaps by Hale. But keep this under your hat until I give the word. Can you handle them?"

Jerry rubbed his hands together gleefully. "It will be a pleasure with your ward. With Ted I may have to be,

"That's the word. He's bigger than I am."
"There are belaying pins even on a yacht," said Dyer.
"Tell your friend about this, but don't let a word of it get aft. We'll take on our provisions and water this

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With gathering speed the yacht leaped from wave-top to hollow. Ted and Budge stood, their arms around the mainmast, their eyes, when they looked aft, popping from their heads. Olsen clutched the main boom, shaking his grizzled head dismally. Ahead the sea was a welter of foam

afternoon and sail for New York tonight. Under way you will receive your official orders in the presence of the crew."

CHAPTER THREE

A Shanghaied Crew

ROGER LIVINGSTON felt rather pleased with the success of his stratagem when he and Ted Stinson returned aboard that evening. They had spent the day at Furnas, after having witnessed the imprisonment of the Portuguese captain and boatswain in a local jail, and at dinner Roger was full of his adventures.

When the after guard sat down to table, with the smoldering but self-contained Mr. Dyer at the head, Roger at his right, Ted on the left, and the poetical Budge Hale opposite, the young strategist began con-

Budge Hale opposite, the young strategist began con-

"Swell place, Furnas," said he. "Great big crater of a volcano, boiling mud holes and sulphur bath."

But Mr. Dyer had his thoughts on other things

But Mr. Dyer had his thoughts on other things. "Boys, I haven't been able to get any satisfaction out of the local police about the men they arrested. They've been taken off to a jail on another part of the island."

Ted shifted uneasily, but Roger never turned a hair. "Up Furnas way, I happened to hear," said he. "Any chance of hiring more men and getting away from here?"

Mr. Dyer, his own plans securely laid, answered Roger's question with equal innocence. "I'll do my best, boys," said he. "Of course we can't go to Funchal now. You want to be back home in time for fall examinations or something, don't you?"

or something, don't you?"
"Very important, C. J.," said Roger. "In fact, if we're going to be held here long I might even have to take a steamer home." With this pert remark Roger flashed a meaning glance at Ted.

Mr. Dyer intercepted the glance and played up to it.

Mr. Dyer intercepted the glance and played up to it.

'There's a small freighter with restricted passenger

accommodations due here tomorrow," said he. "You

weren't thinking of taking that, were you?"

The thought flashed through Roger's mind that his scheme was working even better than he had hoped, and he declared: "Why, yes, C. J. That is, unless you can get men from ashore right away. Ted and I were saying that we'd simply have to take the steamer in order to get home on time." get home on time.

Color came into Mr. Dyer's cheeks, and his lips com-pressed. "Young man," said he, suddenly, "suppose I forbid you to leave this yacht?"

Roger looked at his fellow conspirator as much as to

'Oh, Lord, he's going to make a scene," and said :"You can hardly forbid Ted to leave your yacht

if he's in a hurry, and I promised to go along with him."
"How about it, Stinson?" snapped Mr. Dyer, surveying
the large and slothful Ted with distaste. "Have you ever ten in a hurry?"

Ted, who had helped abduct the sailors for the sheer

ted, who had helped abduct the sailors for the sheer excitement of the thing, began to feel very uncomfortable. He hadn't faced the possibility of a disagreement with his host. "It does seem kind of funny—I mean me being in a hurry," he admitted. "But I got to figuring the thing out, exams and all, and I thought that if we didn't make any better time going back than coming out

—well, I just thought—"

"No doubt," interrupted C. J. "You just thought.
Roger, will you kindly bear it in mind that I am responsible for you, and that I expect you to stay with me until this cruise is finished? I assure you I'm not thinking of

this cruise is finished? I assure you I'm not thinking ot my own pleasure."

"I knew I was in the way," returned the glib Roger, "and that's why I'm taking the steamer tomorrow."

"Say no more about it," exclaimed the irate Mr. Dyer. Until twelve o'clock that night C. J. Dyer paced the quarter-deck, standing guard lest his ungrateful guests should try deserting in the dark. Then as the discordant bells ashore jangled the midnight hour he made a quick

inspection of the schooner's living quarters, finding all doors closed and all lights out. A moment more and he was in the forecastle, snapping on a light which illumined the sleeping figures of Jerry, Luke and the cook, Olsen. "On deck, men, and cast off our mooring line," said he. "Captain, start the engine and run it slow. We'll let the

"Captain, start the engine and run it slow. We'll let the rest of the crew lie below until we're clear of port."

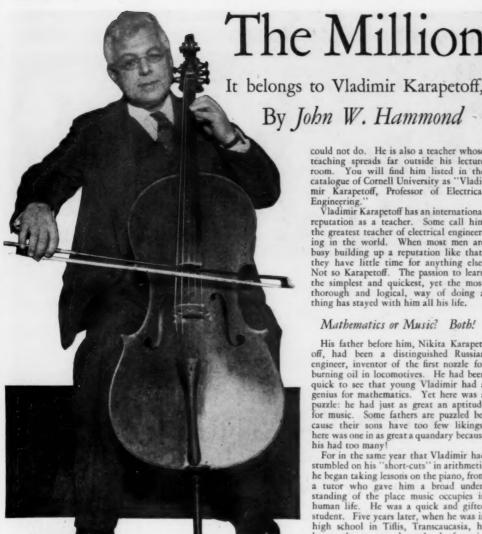
So the thing was done. Jerry, wide-awake, thrilled with anticipation as he leaped to the starter switch and felt the quick response of the big motor. Luke, treading the deck noiselessly in his bare feet, cast off one end of the hawser leading to the mooring buoy. Olsen hauled it in and slipped aft to report all clear. He scented mystery in the air, and liked it.

C. L. rang one bell and tentatively turned the steering.

in the air, and liked it.

C. J. rang one bell and tentatively turned the steering wheel, feeling for the pulsation of water from the propeller on the rudder. The tingle came. Majestically the schooner pointed her bow to sea. Ghost-like, she slipped past other ships and around the harbor jetty. The street lights of Ponta Delgada went into eclipse. The smooth sea rumbled sleepily against the shore.

TTH the coming of daylight the Desire was disclosed skirting the southern shore of the island of San Miguel, sails still furled and her motor of San Miguel, sails still furled and ther motor shoving her quietly at seven knots over a placid, undulating sea. At her wheel stood the burly figure of C. J. Dyer, sweaters bundled about him, an old felt hat thrust back from his forehead, and a contented smile on his unshaven face. His coup had been effected successfully, and he only awaited the happy moment when Ted should wake up and come face to face with the change in their fortunes. Smoke from the Liverpool head indicated that the cook had retired to his usual duties, while on deck Luke and Jerry, somewhat heavy-eyed, but thoroughly happy, went about removing sail covers and rigging halyards for hoisting sail. During the middle watch they [CONTINUED ON PAGE 448] [CONTINUED ON PAGE 448]



When Vladimir Karapetoff found the ordinary four-string cello unsatisfactory, he made a scientific study of the problem and remade his cello with a fifth string of fine steel

HEN the subject of this story was eight years old, he decided that there ought to be some quicker way of doing arithmetic. be some quicker way of doing arithmetic.
He wanted, as was right and natural, more time for play. Yet he liked arithmetic, and did it well. So he set himself to find ways whereby he could learn all about it and still not stay indoors when there was something more exciting to do elsewhere. By himself, this eight-year-old boy found a short-cut to getting the square of any number ending in five; he found out, also, half a dozen short-cuts in multiplication. By himself, before anyone had told him there as such a science as algebra, he discovered it for himself. the used his short-cuts, and spent the rest of his time with other things that interested him. That was in Leningrad, in the days when it was still called St. Petersburg, and

Alexander III was Czar of all the Russias.

Today the man who was once that eight-year-old boy

has one of the most amazing minds in the world; one that operates, in the language of the electrical engineer, at a tension of a million volts. He is a tech-nical expert for the General Electric Company; he plays the piano better than many a man who makes his liv-ing out of doing nothing else; he is a poet, a philosopher, a close student of nature; he is a mathema-tician who applied his mathematics not only to science but to music, and who accomplished something that Johann Sebastian Bach



The Million-Volt Mind

It belongs to Vladimir Karapetoff, who is at least five men in one

could not do. He is also a teacher whose teaching spreads far outside his lecture room. You will find him listed in the catalogue of Cornell University as "Vladi-mir Karapetoff, Professor of Electrical

Engineering."

Vladimir Karapetoff has an international reputation as a teacher. Some call him the greatest teacher of electrical engineering in the world. When most men are busy building up a reputation like that, they have little time for anything else. Not so Karapetoff. The passion to learn the simplest and quickest yet the most. the simplest and quickest, yet the most thorough and logical, way of doing a thing has stayed with him all his life.

Mathematics or Music? Both!

His father before him, Nikita Karapetoff, had been a distinguished Russian engineer, inventor of the first nozzle for burning oil in locomotives. He had been quick to see that young Vladimir had a genius for mathematics. Yet here was a puzzle: he had just as great an aptitude for music. Some fathers are puzzled because their sons have too few likings; here was one in as great a quandary because his had too many!

For in the same year that Vladimir had stumbled on his "short-cuts" in arithmetic he began taking lessons on the piano, from tutor who gave him a broad understanding of the place music occupies in human life. He was a quick and gifted student. Five years later, when he was in high school in Tiflis, Transcaucasia, he began also to attend a school of music. Here he learned piano technique and came to be able to hear music in his mind en he looked at the printed notes

Then in St. Petersburg, his native city, he studied under two of Rubinstein's pupils, at the same time taking a course in civil engineering at the Institute of Ways of Communication. So, through his school and college life, these two interests, mathematics and music, ran along side by side.

matics and music, ran along side by side. But which should he take up as a life career?

He talked it over with his father, and they finally agreed that Vladimir should follow mathematics, making music his pastime, not his profession.

"I never regretted the decision," says Professor Karapetoff now, his smile bringing a twinkle to his eyes. "I honored it all my life, and it has been a great source of joy and consolation to me. My musical life has brought me into contact with many people of fine emotion whom I would not

many people of fine emotion whom I would not have met in my engineering career."

As it happened, Karapetoff cared more for mathematics than for engineering, although he became a civil engineer and later an electrical engineer. He graduated in 1897 from the Imperial Institute of Ways of Communication in St. Petersburg with the degree of civil engineer, and studied electrical engineering in the Polytechnic Institute of at Darmstadt, Germany, in 1899 and 1900. But always, throughout his engineering career, he chose lines of investigation which required a great deal of mathematics.

Almost at once he became a teacher. First, from 1900 to 1902, he was an instructor in several technical colleges and in a night school in St.

technical colleges and in a night school in St. Petersburg. During this period he also designed the building and specified the equipment for a contemplated new polytechnic institute.

While awaiting the completion of this institution, in which he was to be an instructor, Karapetoff secured an appointment for one year as a traveling fellow, and left to study practical electricity in America, taking a course with the Westinghouse Electric and Manufacturing Company.

pany. He never went back. So attached did he become

to his adopted country that at the end of two years he resigned his connection with the polytechnic institute and settled for good in America. In 1904 he became assistant professor of electrical engineering at Cornell; in 1908, full professor.

In 1910, the university asked him to develop a course in advanced electrical theory. From this came two books, one on the electric circuit and the other on the magnetic circuit. In these books Karapetoff boldly changed the technical language of his profession. Some of these new terms which he suggested to describe electrical happenings have not been accepted by many engineers, even today. But the new generation of engineers, even today. But the new generation of technical men has shown signs of finding them useful, especially in mathematical problems which they must face in high-tension design.



The Mechanical Brain

Meanwhile Karapetoff had become deeply interested in short-cuts. Much of the mathematics of electrical ma-chinery struck him as too long, too complicated. Why should there not be some mechanical way of solving some of these difficult equations? Why should he not be able to con-struct a machine to do a great

deal of unnecessary brain-work? That was the beginning of an idea which he later developed for a machine to do the work of

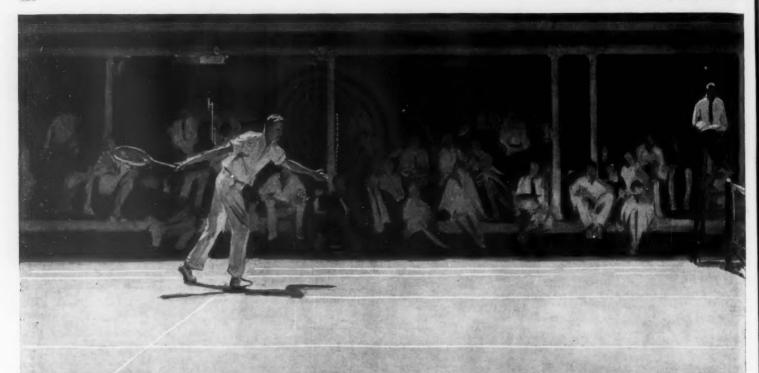
difficult electrical mathematics. Engineers call such things "kinematic computing models." If you want some idea of what they are like, think of one of the some idea of what they are like, think of one of the simplest forms such a machine can take—the ancient pantograph. When you adjust its rods in a certain way and move one part of the pantograph, the other part will move one-half, or one-quarter, or twice or three times as far, depending on your adjustment.

Karapetoff's machines were, of course, much more complicated. He began thinking of them almost twenty years ago, and looked through many books on mechanisms for encouragement. He talked to brother experts, who assured him that, if such devices as he had in mind were possible, they would have been invented

But Karapetoff kept on hoping he could get up some-thing of the sort, realizing what a time-saver it would be to electrical engineers. He himself tells how it finally came about:

"One morning I arose, and almost before I knew what I was doing I went to the cellar, got an old paper box, [CONTINUED ON PAGE 462]





The Worm Turns—and Climbs

F course we didn't call him the Worm; we called him Les or Lester; but his standing at the Telford Tennis Club was about that of a caterpillar in a chicken yard. And it was pretty much his own fault. He was born too good-natured and grew up too obliging. He appeared at the club for the first time one afternoon in April. He looked about seventeen or eighteen; and his feet were too large and too numerous for him. You couldn't exactly call him good-looking, and he wasn't bad-looking: dark hair and eyes, a kind of sallow complexion and a friendly grin. But what took my eye, as he came out and stumbled into a chair behind the back-stop, was the way he was dressed.

came out and stumbled into a chair behind the back-stop, was the way he was dressed.

He wore oyster-white crash knickers, a pair of bright-green hose and a faded blue shirt with the sleeves ripped out at the shoulders. He carried an eye-shade, a tennis racket and two balls. If it hadn't been for those we might have thought he had set out to play golf and had got the wrong address. But the racket told the story, and we knew that we had a new member. A junior member, of course, but still a member; and as we didn't have any of course, but still a member; and as we didn't have any too many, and were having trouble keeping the club up, none of us laughed out loud. Of course Joe Warden had his crack. Joe would. Joe said in a very audible voice: "Well, look at Bill Tilden, fellows!"

"Well, look at Bill Tilden, fellows!"

Lester—his full name turned out to be Lester Drew—heard, just as Joe meant him to, grinned sort of painfully, and dropped the balls. Then, when he got up to get them, those feet of his became tangled, and he almost fell down. Then Joe did laugh, and I guess some of the rest of us chuckled. And about then Chetwood and Keep got off the first court and Steve Updegraff and I started our ladder match, and I didn't see any more of Lester.

But he was back the next day, and most of the following days, just as soon as high school was out, and sat around with his racket and his eye-shade and looked on. on. Of course it wasn't long before he got acquainted, and one afternoon he came inside and sat on the bench, and when Jake Lumis made a corking pick-up he said longingly: "Gee, I wish I could do that!" I guess he was sort of speaking to himself, but I was sitting next to him, and we said to said. Said speaking to himself, but I was sitting next to him, and we got to talking. He turned out to be a nice kid. Said he'd been playing for three or four years over in City Park but wasn't getting any better. So he had joined the club because he guessed a fellow could learn a good deal by watching, even if he didn't get to play much himself. Well, I'm sort of easy, I suppose. Anyhow, I made a date with him for Saturday morning. You could see he wanted to play good tennis more than he wanted anything else in

By Ralph Henry Barbour

ILLUSTRATED BY HAROLD ANDERSON

the world, and I thought if he wasn't too bad I might

the world, and I thought if he wasn't too bad I might give him a few tips.

Well, he was pretty awful in some ways. Still, he seemed to know what was right and what wasn't, and he tried harder than I'd ever seen any fellow try. He didn't have much of anything to start with—unless it was form. That was really funny. The poor dub couldn't make a decent serve or stroke a ball over the net—unless it hit the back-stop—or do anything else unless it was an accident; but to look at him try you'd have thought he was Hunter having an off-day! Honest, he had the motions down pat, and to watch him get into position and swing at a ball you'd think sure he was going to pull off something wonderful. He explained that afterwards. He had been watching tournaments and matches whenever he been watching tournaments and matches whenever he could get to them, and then he'd go home and practice in front of a mirror! What do you know?

I let him take a game in each set to sort of encourage

I let him take a game in each set to sort of encourage him, and I thought I was getting away with it, but I wasn't. I said, "Well, next time maybe you can get two games off me, Lester." And he said, "No, because if we played again I'd ask you not to give me any." "Pshaw," I said, "you won those all right. We'll try it again some day. And, look: you keep your eye on the ball till you hit it. A lot of your trouble starts right there. You want to forget bow to make your shots and make 'em. And play all you can, see?"

I didn't find time to play him again until well into

play all you can, see?"
I didn't find time to play him again until well into June, just before the State Tournament, but when I did I found he was a good deal better. He was getting on, I told him. "Gee, I don't know, Bud," he said. "It doesn't seem so to me. I thought a couple of months ago that maybe I'd have my name on the ladder by now."
I repeated that, and Joe Warden overheard it. Joe had a good laugh first, and then he said, "Well, listen, fellows. I think he ought to be on the ladder. I'm going to see that he gets there. Yes, sir, he'll be No. 23!" We thought he was fooling, but the next afternoon I came out of the locker room, and there was Lester in front of

out of the locker room, and there was Lester in front of the board looking as proud as a peacock, and hanged if his name wasn't down on the ladder in last place. He tried not to look silly when he saw me, but he couldn't

get that grin quite off.

"Well, what do you know!" I said. "In twenty-third position! That's fine, Les, old bird! Go on and climb!"

"I mean to," he answered, as serious as you please.

"It—it's a mighty long way to the top, though, isn't it? Where did you start, Bud?"

I put my finger on the slip opposite eight. "Right there, kid. And I'm still right there. If you don't climb faster than me, you'll be growing whiskers before you're halfway. But he didn't look discouraged.

But he didn't look discouraged.

Everyone liked him, but that didn't prevent them from making a joke of him, and also a sort of club chore boy. He was always willing, even eager, to do errands, chase balls, tighten nets or fetch ice-water from the clubhouse. If Joe Warden needed something he had left at home, Lester would jump into his little ramshackle Ford and go for it. If a hall went over the back-stop into Ford and go for it. If a ball went over the back-stop into the long grass, it was, "Hi, Lester! Ball out here. Get it, will you?" And Lester would plunge through the gate and search five or ten minutes until he found it, act-ing all the time like someone had done him a big favor.

A LOT of us made fun of Lester; good-humored fun, you understand; not trying to hurt his feelings. But Joe was different. Joe wasn't a bad sort, but he thought a good deal of Joe and was rather high-handed around the club. He wasn't even on the Committee, but around the club. He wasn't even on the Committee, but he had more to say about running things than if he had been. Could tell you what was wrong with your strokes or your game in general, even though he was only No. 4 player himself and had never been able to get a set from Jim Wilson, our No. 1, since he had joined. He was sort of loud-mouthed, Joe was, but we were used to him and let him talk and boss as long as it didn't matter. I don't believe he ever actually set out to wound Lester's feelings, but he did it pretty regular. He wasn't really cruel, I guess, but he had found out that he could do and say things that hurt, and he liked to use his power.

Lester didn't stick to his knickers and green socks long:

Lester didn't stick to his knickers and green socks long; not with Joe around. I guess he didn't have much money to spend on clothes, but he got a pair of duck trousers and some new shoes, and after a while the old blue shirt gave way to a white one, and he looked pretty well. You could always depend on Lester to warm you up before a match or if there was no one better around to play with match, or, if there was no one better around, to play with you. He was good enough to practice on. Jim Wilson, you. He was good enough to practice on. Jim Wilson, our No. 1, was just starting to practice law, and had just got married, too, and he didn't have as much time for tennis as most of us. But, oh, boy, how he could play when he did play! One day I got out to the club about an hour earlier than usual to keep a date with Steve Updegraff, who was going fishing later, and blessed if there weren't Jim and Lester playing over on the fourth court! They finished before Steve showed up, Jim winning 6—0, 6—0, in spite of easing up a whole lot. Then



I was certainly surprised on Saturday to see what a crowd had gathered. Naturally all the members were there and a lot of them had brought friends, but that didn't account for about sixty or seventy folks in the public stand. If we had charged admission that day we could have made a nice little pile!

they came over to the bench and Jim said, "Bud, this kid's going to play some tennis some day. You loafers out here ought to take him in hand and help him." Then he gave Lester a lot of advice and was still at it when Steve came

After that Lester thought Jim Wilson the greatest thing that ever happened and followed him around like his shadow. I've seen Lester stop in the middle of a match over on the junior courts and come across to watch Jim play. And he would get in his way just so Jim could tell him "Hullo!" He'd follow the other into the locker from, too, and be tickled pink if Jim would send him for towels. And, of course, he right away patterned his game on Jim's.

He was still suffering from his Wilson complex when the State Tournament began. About a dozen of us entered, not expecting to get very far, of course, but just for the fun and the experience. We used to get some mighty good entries; fellows from all over the state and now and then a ranking player who hap-pened to be around. This year, though, the best of the seeded chaps was Malcolm Knowlton. Knowlton the seeded chaps was Malcolm Knowlton. Knowlton had been state champion for four years and was ranked No. 6 in our section. He didn't have any trouble in the singles, wading right through to the semi-finals and then beating Stevens of State U in four nice sets. He put Jim Wilson out in the quarter-finals, but in the doubles he and Jim played together and got their names on the cup for the second time. But what I started to tell about was the famous exhibition match. exhibition match.

There was a big gallery there on Thursday, seven or eight hundred folks, I suppose, and when Bailey, who was to meet Rhodes in the quarter-finals, got in a smash-up down the road and the match had to be postponed until later the Committee decided to stage an exhibition to keep the gallery enough. postponed until later the Committee decided to stage an exhibition to keep the gallery amused. First I heard of it was when Joe Warden came out of the clubhouse, grinning like a catfish, and called to Lester, "Get your racket, kid. They want you and me to play a couple of sets so's the audience will forget they're being frizzled."

Lester looked scared. "B—but I couldn't play in front of all these people, Joe!" he protested. "Besides—you—you'd beat me like anything!"

"Might as well get used to a gallery now as later," said Joe. "And if you play that net game of yours like you've been playing it, kid, who knows that I can beat you? Now don't stand here arguing. Get your racket and come along."

Lester looked at me, and I frowned and shook my head; ut phsaw, you couldn't stop him if he wanted to be bliging. "I'll do the best I can," he said, "but I guess the audience won't enjoy it much, Joe!"

But when he made that crack he was away off. The But when he made that crack he was away off. The crowd nearly laughed themselves sick! Jake Lumis umpired, announcing very importantly "an exhibition match between Mr. Joseph Warden and Mr. Lester Drew, both members of this club!" After the second or third game the gallery concluded that it was a comedy,

and then they laughed whether anything happened or and then they laughed whether anything happened or didn't. Joe had a glorious time, keeping as serious as a judge, calling "Oh, hard luck!" when Lester missed a shot, or "Good try!" when he fell into the net, or "Were you quite ready?" when he was aced. The crowd loved that stuff. Lester hung onto his grin, but it was a pretty sad effort. He knew Joe was making a fool of him, and we wouldn't have blamed him a mite if he had quit and walked off the court any time. But he didn't. He saw it through; two love sets, dashing up to the net in the first one and Joe passing him every time with ease, and he playing deep court in the next one and Joe dropping he playing deep court in the next one and Joe dropping them just over. At the end Joe made him come up and shake hands at the net, and it looked like that was the last straw to Lester.

They got a lot of applause as they went off, Lester look ing sort of white in spite of the perspiration that was rolling off him and Joe smiling like he had pulled an awfully good one. But I guess the looks some of us gave him changed his mind. Lester told me a day or two later Mal Knowlton wasn't there to see. Because, of course, Lester by that time was worshipping Knowlton and already beginning to reform his game along Knowltonian lines. Well, two or three of the fellows pitched into Joe, and Jim Wilson took Mr. Patterson to task. But Patterson was innocent enough. He had mentioned an exhibition match to fill in and Joe had heard and offered to find another fellow and play it.

ESTER was around again the next day, ready to take his razzing, but most of us laid off him. That's about all there is to tell about the tournament; except that on Friday morning I came across Knowlton and Lester talking under the pergola like old cronies. I won-dered a lot, but that's all I could do. I guess they sat there half an hour, and when Lester passed me he hardly saw me and looked like he had received the accolade—if you know what that is. A few days later he and I were watching Joe Warden and Jake Lumis play a challenge match. He wasn't nearly as chatty as he had been before the tournament; hardly spoke a dozen words during the first set. Then, when we were satisfied that Jake was going to win and keep his No. 3 place on the ladder, he

spoke up again.
"Bud," he said in a thoughtful, far-off sort of voice,

T'm going to beat Joe, too, some day."

A week later he told me he wouldn't be around any more for a while. He had just graduated from high [CONTINUED ON PAGE 456]



ments and matches whenever he could get to them, and then he'd go home and practice in front of a mirror

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I grabbed a big life-preserver and flung it over the side. It landed almost over the nose of one of these giant fishes. Just as he struck at it, a wave turned it over, and it settled around the fish's neck. I was on the other end of that line. Away went the fish, frantic at being harnessed

Nothing But the Truth

APTAIN PEN opened the door of Napoleon's cage and coaxed him with some queer-sounding clucks. The parrot some queer-sounding clucks. The parrot hopped out on his master's finger, ruffled his feathers, and blinked contentedly. "Go on," cooed the Captain. "Get up on that rafter and take a little exercise."
"Grawk!" observed Napoleon—and did so. The boys laughed as the bird stood on his head.
"Where did you get Napoleon?" asked Larry Dodd.
"You've never told us where he came from, or anything."

thing."

"Napoleon? Oh, I got him long ago, on one of my voyages to Africa. Leastways it was off in that direction. Luxuria was the name of the place, and a mighty queer one it was. So you want to hear about it? Hum. Let's

I was the John B. McGinty, out of Portland, that introduced me to Luxuria (began Captain Pen), although that little-known port wasn't on the schedule. Neither was the double-barreled, blue-fringed tail-twister that sent the McGinty to the bottom of the sea.

That was a storm the like of which I hope I never so That was a storm the like of which I hope I never see again. I saved myself after a terrific battle with the high waves, although how I did I don't know. All I remember of that part was that I was in the water for hours, a life-preserver helpin' me to stay afloat, and after givin' myself up for lost I staggered up on the beach of an island. Exhausted, I slept for hours.

I woke up, some refreshed, and took stock of the situation. There wasn't a sign of the ship or any of my mates. There was I on some strange island, off the beater track of ships, and once again face to face with the prob-

track of ships, and once again face to face with the prob-lem of savin' my skin.

It was a beautiful spot, tropical, and everything grow-in in profusion. I wandered inland, lookin sharp for somethin to eat, for I was powerful hungry. I stumbled on a spring, crystal clear, and that put new life in me. And on lookin' up from the spring only a few feet away I spotted a grove of orange trees. I wouldn't dare tell you how big those oranges were. But I will say that if they'd been green I'd have called 'em watermelons! Yes, sir!

I ate one—or all I could of one. Immediately I felt buoyed up, full of good spirits. Instead of walkin', I felt more like leapin'—and leap I did through the beautiful

By Harry I. Shumway

ILLUSTRATED BY F. STROTHMANN

rollin' land. Everywhere gorgeous birds sang in the trees—and such flowers and fruit! I kept goin', and finally, on comin' out of a tangle of flowers,—somethin' like wild roses,—I saw a sight that put a damper on my leaps and bounds.

In front of me was a long row of caves; in fact, a double row. These were faced with stone slabs. It was a regular little village, fires goin' and a few folks movin' about. Some of 'em saw me, but they were only curious like anybody would be to see a stranger pop up out of the sea. They were dressed in a kind of rough sackcloth,

the sea. They were dressed in a kind of rough sackcloth, like coarse burlap—and mighty poor tailorin' it was. One of 'em came over to me. He was tall and thin. I could see right off he was a pretty dejected-lookin' feller, full of woe and heavy cares. I've had some strange welcomes in furrin parts, but never one quite like that. "I'm awfully sorry to see you here," he said, in a tomb-like voice. "Too bad you happened here. I suppose you were wrecked, and I can imagine no worse place to be stranded than this. You won't like it here. It's horrid—but maybe it's just as well to be prepared for the next world by living in a bad place here. Perhaps it won't be for long." won't be for long."

A pretty saddish specimen. I was in no mood for such

mournfulness. "If you'd just been on your way to Davy Jones's locker, I guess you wouldn't knock any place. What's the name of where I am now? And how comes it that you speak English?'

that you speak English?"

He groaned. "I knew I'd meet somebody I didn't like today—I just knew it. Too many questions. Well, we may not be here on earth long, so I'll do the best I can. You look wet and cold; maybe you'll catch pneumonia." "See here," I said, kind of peeved at his dolefulness. "I'm not goin' to die. Salt water never killed anybody—as a bath. Now, tell me where I am—and how long I've got to wait for a ship."

"No ships ever come here. Why should they, to this terrible island? The name of it is Luxuria, and it's a terrible spot. Ah, woe is me!"

I looked all around. As islands went, I didn't see any-

thing bad about it. It was warm and tropical-lookin'; nothin' to cry about.

"Well, what's wrong with it?" I asked. "It looks kind of pretty to me."

He sighed very heavy. "It might be for some. In fact, it does seem to be for my friend No. 27—and there he is comin' down the path now. He is all the time. Luxuria acts in a strange way on happy all the time. Luxuria acts in a strange way on who live here.

'How's that?' There is something in the air, the water, the very earth, that over-develops one's salient characteristic. Take me, for instance. My name is No. 83. My most prominent trait was a sort of melancholy. I was, even as little 83 in my cradle, inclined to look on the dark side of things. So, you see, the strange developing element of Luxuria makes me even more so. I think I'm getting

of things. So, you see, the strange developing element of Luxuria makes me even more so. I think I'm getting worse, too."

No. 27, as he called him, was now within a few hundred feet of us, and I turned to look at him. He was singin' at the top of his lungs, stoppin' every few seconds to do a little jig or laff until his sides shook. I never saw such a happy feller.

"He doesn't seem sad," I said.

"Of course not. His most prominent trait was joyousness. Everything to him is a joke. If he pounds his finger with a stone hammer, it's a joke on the hammer. He even laughs at a toothache."

"Well, well," I said. "That's a queer thing. But why do you call yourselves by numbers?"

"I understand that in the beginning, when the original settlers were cast up on this deserted island, one of the number was what they call a bookkeeper. Of course, Luxuria developed his leading trait, which was a love of figures, and he became quite impossible with them. He's been dead now fifty years, but it was he who gave people numbers instead of names."

Old Calamity 83 introduced me to No. 27 after I told him my name and nationality.

"Freedom. An odd name. I think, so long as you are to become one of us, that No. 48 would just fit you. There is a sort of 48 look about you, and 48 is one of my favorite numbers—if anything can be said to be a favorite with me."

No. 27 laughed heartily. "So you had a wreck! Ha!

with me

No. 27 laughed heartily. "So you had a wreck! Ha! Ha! And had to swim for hours in the raging sea! Haw! Haw! What a joke!"

N

I didn't know whether I liked this extra-happy lark much better than the gloom of old 83. I guess I showed somethin' of how I felt. No. 83 studied me a moment. "Perhaps it would be the proper thing to escort 48 over to the Court to see No. 1."

'No. 1?" I said.

"Yes. You see, No. 1 is the one who governs us. From a child he showed a decided inclination to—er—mind other people's business. You know, one of those persons who want to run folks. Naturally the peculiar essence of Luxuria developed this trait. So now, although he is very old,—120, to be exact,—he still runs things—

So off we started. At the end of the row of caves we

came to one with a larger entrance. In front of it, sittin' in the sun, was an old man, very judicial-lookin'.

"Shush!" says 27. "There he is! Be careful. He's very—hum—full of decorum. Better bow to him. He'll like that."

So I made a fine bow and started to tell him who

I was.

"Order in the Court!" he snapped, rappin' with a stone hammer on a big hollow gourd. It sounded like a bass drum. "The Visitor will answer the questions as put to him by the Court. Do you swear to tell the truth, the whole truth, and nothing but the truth?"

I was so surprised I couldn't say anything for a minute; just stared at him like a big booby. There was a young parrot perched on the top of the doorway above his head. He looked down at me, squinted one eye and squawked, "It's the truth, the whole truth, and nothing but the truth!" Yes, boys, you guessed it. That young parrot was none other than our Napoleon, the very one you see here in this barn. you see here in this barn.

Well, finally I stammered out that I guessed I was a man of veraciousness and probity, although sometimes I did feel myself in the grip of a powerful flight of imagination, as you might call it. And all this time, mind you, I was strugglin' against a desire to speak up and tell the story of how I came to be there. I felt just burstin' with narrative.

"Visitor," said camest thou from?" said No. 1, grave and precise, "where

From the grandest country in the world, the United of America, where flowers are sweeter and m tains higher and men are bigger than-

"The Visitor will not be unmindful of the fact that he has taken an oath," burst in No. 1. "I have not heard of this country you mention. Where is it?"

of this country you mention. Where is it?

My tongue was itchin' to cluck away like a hen that's laid a double-yolked egg. Never had I felt such an urge to embellificate and fly high on a voyage of narrative. I was just burstin' with rich adjectives and such. I guess

it was the orange I'd eaten that was beginnin' to act on

"This grand and glorious land, teemin' with marvelous fauna and flora from the rockbound coast of Maine to the sunkist shores of golden California, is over around the other side of the world."

"Around!" snapped No. 1. "Do you mean to imply that the world is round?"
"Course it is," I said. "I've sailed around it several times. It's as round as one of the luscious oranges of jeweled Florida, as round—"
"The Visitor must cush his dishere for

The Visitor must curb his flight of fancy—ignoring a temptation to call it a shorter and uglier name. The world is flat. Anybody can see that with half an eye. Now, how came you here?

TOOK a great breath of the wonderful Luxuria air. "Your Honor, it was like this. Yesterday, about five hundred miles from here, I was pursuin' my duties as second mate aboard the gallant schooner J. B. McGinty from Portland. The sky was fair, and not a thought of trouble was in the air, when suddenly I turned and saw a great dark cloud comin' at us at a terrible rate. Lightnin' flashed from it, and then the thunder roared.
"On it came. Almost at once the sea began kickin' up

like mad. The waves were a hundred feet high, and soon the J. B. McGinty was bobbin' around, doomed to destruction. Somethin' had to be done. Quickly I called to the men: 'Break open those tins of olive oil! Heave

to the men: 'Break open those tins of olive oil! Heave it overboard! It will calm the sea!'

"You see, we were carryin' a cargo of very fine olive oil in tins. With the greatest difficulty the men broke them open with hatchets and heaved the oil overboard. It acted like magic. In a few seconds the J. B. McGinty was ridin' a comparatively calm oasis of water in a desert of ragin' ocean. desert of ragin' ocean.

Then suddenly one of the men shouted: 'The sea is

alive with giant fish! They're drinkin' up the oil!'
"Alas, it was true. There were thousands of these
fish. One of the men, who had had a lot of fishin' experience, said they were the Italian Spire-faced Dogfish— but to me they looked like swordfish. At any rate, they were drinkin' up that oil at a fearful rate. In ten minutes the oil had all gone and the McGinty was thrashin' about worse than ever.

"It looked bad. One of the men, leanin' over the rail,

lost his footin' and plunged into the boilin' sea. Quickly I grabbed a big life-preserver and flung it over the side. chance, it landed almost over the nose of one of these int fishes. Like a flash he struck at it. Probably it giant fishes. was oil-soaked and he smelt it. Just as he struck, a wave turned it over, and it settled around the fish's neck, tight as a wedding ring.

"Well, I was on the other end of that line. Away well, I was on the other end of that line. Away went the fish, frantic at bein' harnessed, I s'pose. And, as I had hold of the line, overboard I went, too scared to let go. There was a queer situation. If I let go, I'd drown. If I hung on, no knowin' where I'd end up. "Thinks I, it's poor policy to change horses in midstream, so I hung on. Faster we cut through the water, sometimes under it, sometimes smashin' into the combers like a huller. We know ich how feet waters was a laboureh.

like a bullet. No knowin' how fast we went, although I noticed steam was comin' out of my jacket, the friction

was so great. So I s'pose it was pretty fast.

"We must have been racin' a good four hours when I took a look, and there was this island to port about half a mile. Thinks I, if you're goin' to get off at all, now is

the time to get!
"So I let go. The fish, released of my load, turned over two or three times, got dizzy or somethin' and went away in the opposite direction, with a dazed look on his face. Spent and worn out by the rushin' water, I staggered up on this beach—and here I be. I thank you."

No. 1 looked at me stern and pained. No. 27 laughed fit to burst, and 83 moaned all through the recital of this rate.

"Order in the Court!" snapped No. 1, bangin' the urd again. "It is my order that the Visitor shall be gourd again. gourd again. "It is my order that the Visitor shall be confined to his cave for twenty-four hours on breadfruit and water. After that the Court will decide on such further disposition of said Visitor as said Court shall determine. Court dismissed!"

"Long may Luxuria remain!" shouted 83, then added: 'Although it looks extremely doubtful. Any day may

be the last. Ah, me!"
No. 1 spoke again. "The Visitor's oral offerings would
No. 1 spoke again. "The Visitor's oral offerings would imply he was the victim of a malady. It is the Court's suggestion that he be looked over by No. 65, the Official Diagnoser and Prescriber.

So off we started. I didn't know whether to be downhearted or not.

They stopped in front of one of the caves. It had a gn on it: "No. 65. Hours ten to two." sign on it:

No. 27 rapped on the doorway, and a most solemn-lookin' man came out. He had a long black beard, and

he stared at me as if I was a bug.
"Hum," he said, several times. "How long have you

been this way?"
"Way? What way?" I said.

"You are far too thick for your height. Now, there are two ways we can fix that. We can roll you out, with supplementary stretching exercises, or we can give you pineapple juice baths. Maybe both."
"Well, I feel all right," I said, kind of mad. "My

pulse is good-



"So you had a wreck! Ha! Ha! And had to swim for hours in a raging sea! Haw! Haw! What a joke!" I didn't know whether I liked this extra-happy lark much better than the gloom of old 83 No. 27 laughed heartily.

Hi-Jackers

Stony System, "how soon are you leaving?"
"Dad, Dad," protested his daughter
Aileen, "he's on my time now, not yours."
"Right," her father replied, laughing
with her, "but I meant, what train are you taking out tomorrow?"

out tomorrow?"

"The first one, sir," said Jim Byers, captain of the Jordan University football team, but just now concluding his summer's work as assistant to Mr. Allison. "It goes through, you know, and I'll have only the one change to make for Jordan."

"Big hurry to get back, I suppose?" asked Mr. Allison. He seemed to be worried.

"No, except by leaving tomorrow I'll have four days to get settled before school and football begin," Jim explained.

"Well, here's why I ask," his employer said. "While you and Aileen have been saying good-by to each other for the last hour or so—"

for the last hour or so—"
"Dad, we were only talking football," Aileen flushed. "I've been interviewed by two men from the prohibi-tion-enforcement division of the Treasury Department. We're in a serious position. You know the Puddy Mountain division? Of course, because you were all over it last summer on the electric scheme. We've had a lot it last summer on the electric scheme.

of trouble on it with wholesale bootleggers. Thought

we had it stopped, two different times.
say it's broken out again,
worse than ever. They have just served notice on me that just served notice on me that if it is not stopped, for good, the Treasury Department will hold the Old Stony System responsible. I don't think they can do that, but it's a serious situation. As soon as I reach the office in the morn-ing I'll get hold of the detec-tive head, but meantime—'' And he hesitated.

And he hesitated.

"If there's anything I could do, sir, I'd be glad to help out," said Jim.

"Well, there is—or, there may be," said Mr. Allison.
"I hate to give you any assignment that looks like spying or sneaking among our own people. But the trouble with prohibition enforcement is there are so many people willing to help evade the law If some of our own people are crooked about the liquor law, as is possible, then some others might be trying to help them cover it up. Our own detectives, even, might be willing to overlook any crookedness on the part of our employees. I wonder— could you stop off at Potter-ton, and look over the division, on to Swaim? And then

ston, on to Swaim? And then telephone me?"
"Why, yes, of course, sir,"
Jim Byers replied. "I don't know much about this business, but I'll see what I can find out. I'd just as soon put in a few licks against the bootleggers, if I knew

you needn't bother about that. Just see if you can learn what's going on," said Mr. Allison. "If u can, let me know, and I'll see that the detectives stop it. And you won't need to lose much time on your way back to Jordan."
"What has been happening,

sir?" Jim asked.
"Bootleggers are getting government-warehouse alco-hol off the railroad," said Mr. Allison. "A carload at a

"Carloads? Whew!" Jimmy

By Jonathan Brooks

ILLUSTRATED BY GRATTAN CONDON

whistled softly. "Nothing small about them, is there?"
"Their deals run into hundreds of thousands of dollars," Mr. Allison explained. "That's why they're ars," Mr. Allison explained. "That's why they're so clever, and so desperate; and that explains why they may be able to line up some of our people to help them. They spend money freely, when they have a chance to make so much?" make so much."
"I see," said Jim.

"I see," said Jim.

"Be careful not to make any of our employees suspect what you're up to," cautioned Mr. Allison.

"And for goodness' sake, keep away from the bootleggers and their guns," Aileen added.

An hour later, as Jimmy said good-by to the pretty girl, and reminded her that she had promised to come out to lordan to see the last home game of the football to Jordan to see the last home game of the football schedule, she once more warned him to be careful.

"Those bootleggers are hard characters," she said. They shoot when anybody gets in their way." "I'll probably not even see one—let alone get in his ay," Jim reassured her.

Billy Armstrong, Jim's old buddy from Lockerbie and

Jordan, end on the eleven, met him at the station next morning early, and Jim was in time to prevent him from buying a through ticket west. On the train he had time to explain his assignment and ask Billy to stick with him until he was ready to

ask Billy to stick with him until he was ready to proceed to the university.

"Boy, I'm on," exclaimed the exuberant Billy, son of the multimillionaire head of Universal Metals.

"And while I'm at it, I can take the old railroad apart and see what makes it work!"

At Potterton, that afternoon, they left the fast through train and took a walk about town. Then, back at the

train and took a walk about town. Then, back at the station, Jimmy asked the agent if there was a freight leaving for Swaim soon. Told that No. 7 was pulling out in about ten minutes from the yards, he asked who had the train.
"Old man O'Shea," replied the agent.

HE two Jordan seniors took their bags and hurried to the yards, where Jimmy was able to find O'Shea.

The old freight conductor was talking to his en-

gineer and held a sheaf of papers in his hand.
"Hello, Mr. O'Shea," said Jim, after waiting a minute to give the old man time to finish his business with his

engineer.

"Hello, boys," said the old man, starting to walk along the cinder path beside his train.

"Mr. O'Shea, may we ride with you? Crow's-nest got a load today?" asked Jimmy.

"Who are ye, to be pickin' out my train to ride?" asked the old man, testily.

"Byers—don't you remember me? I rode with you last

Byers-don't you remember me? I rode with you last

"Have I now? A million cars, mebbe, more or less," said the old man. "But tell me, son, what's the gr-grand idea, ridin' a caboose instead

of a private car?"

"Because I figure this is one of the places to learn the railroad business," said Jim.
"The freight pays the freight, and the men that handle it are the real money-earners for the company. I like to pick up pointers."

"It's pointers ye want, hey? What kind of pointers."

Are we codding me nove?"

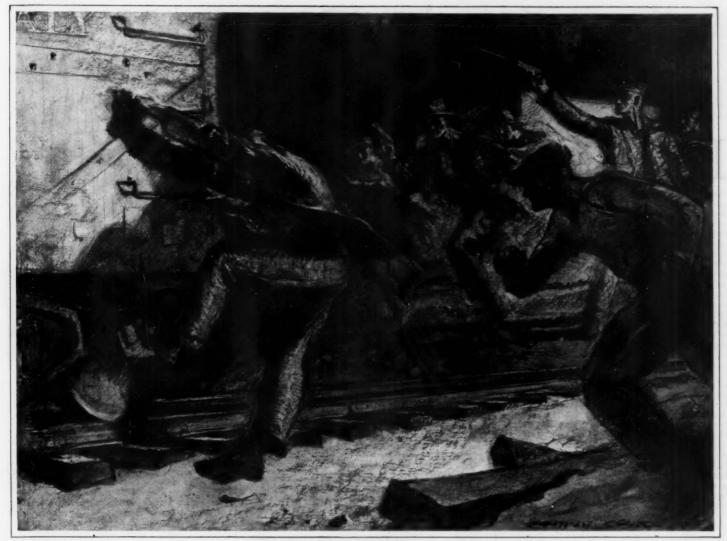
Are ye coddin' me, now?"
"No, sir," said Jim. "Last summer we talked about coal. Have you noticed we're han-

dling more, since then?"
"Yes," O'Shea admitted.
"Well, this time," said
Jim, "I'd like to get some said ideas on increasing our haul of liquor—alcohol, you know." He winked at Billy

know." He winked at Billy Armstrong as he spoke, but kept his face straight.
"What?" exploded the old man. "Sa-ay now, we've got more of that now than's legal or good for us. Any more, and Old Stony loses more, and Old Stony loses the oldest and best freight conductor on the line! Me bhoy, I wouldn't have thought it of ye—but say, now, y'r just coddin' an old man, aren't ye?''

"Yes, I was, Mr. O'Shea,





The lights of one of the motor trucks shone on them from behind. Men came running. Shots rang out. One of the pursuers overtook the car and clutched a handhold. In a moment be would be up and over the top of the car

just kidding," grinned Jimmy, rejoicing that, by the old conductor's tone, he had found an ally. "What I'd really like to find out is how this game is being worked, and how it can be stopped. The stuff goes freight,

"The alcohol does, but the whiskey and other rale liquor goes express, and I'm thankful for that much, anyhow," said O'Shea. "If we had that to haul, too, anyhow," said O'Shea. "If we had that to haul, too, our lives wouldn't be safe. Not very safe, anyhow—why, would ye believe me, I've been held up, and made to cut me train—and drop a car of that stuff, no less than four times? And y'd do the same, with fr'm two to half a dozen guns pointed at ye!" he added, defensively. "But that's not done any more is it?"

But that's not done any more, is it?

"But that's not done any more, is it?"

"No, they're smarter now," said O'Shea. "They dress it all up so's to make it look regular, and all."

"But even so, they put the train crew in the hole, don't they?" pursued Jimmy.

"Me bhoy," replied the old man, slowly, "I'm an old fellow, now, and I haven't got much more time to railroad. Forty years I've been with this old line, and in all that time I've never gone behind the backs of the other min. D'ye see? I'm not startin' now, ye mind. Ye can figure out I'r y'rself how it's done, whether it's the agent or the crews are guilty."

"But it's got to be stopped," Jim argued.

"It has that, it has that," agreed O'Shea, fervently.
"But I'm not the wan to be a stool pigeon. Lave me think awhile," and he clambered down from the nest, huddled himself at a little desk and lighted his pipe.

About nine o'clock, as they rolled slowly into the outskirts of Puddy, he motioned to Jimmy, preparing to

huddled himself at a little desk and lighted his pipe.

About nine o'clock, as they rolled slowly into the outskirts of Puddy, he motioned to Jimmy, preparing to leave the train with Billy, to see Charlie Allison.

"Come over to Swaim—'tis there the big old distillery is—tomorrow," he whispered. "Ride back with me to Puddy, d'ye see? If ye happen to see me consist before the agent there checks it, and if ye happen to see it again after he checks it, I can't help that—now, can P!"

He stard at Jimmy threwdly with determination in He stared at Jimmy shrewdly, with determination in

his eyes.
"Mebbe there'll be a shipment tomorrow for thim big
wholesale an' manufacturing druggists back over the

ridge at Potterton," he said. "If there is—we'll pull out at three o'clock. Power to ye," he concluded. "But niver will it be said that I throwed me own people

Jim and Billy left the train, and Billy, who had over-heard the old man's gruff whispering, wanted to know what a consist might be. The word, with the first syllable accented as the old man had accented it, puzzled

"The list of cars, with numbers, destination, and so forth, that make up the train," explained Jim. "That's the consist."

IMMY had intended to have a look around at Swaim and, perhaps, talk to some of the railroad men, but after thinking long and hard about the wily Tim O'Shea's hint, he decided to do nothing more than report Tim at his caboose in the yards just before three clock. He was not concerned with the methods used o'clock. He was not concerned with the methods by the thieves in getting alcohol out of the distillery. His only job was to find out how they used the railroad's facilities for moving it. Tim O'Shea's hint about two looks at his consist convinced him he would find the secret there. With Billy, who, like himself, was somewhat nervous, he boarded the caboose at the end of a long string of freight cars in the Swaim yards, at five minutes before three.

"Well, now, we oughtn't get outa here late," mumbled old Tim, hardly looking up at them. "Lemme see, Nos. 864, 868 and 941," and he ran his thumb along a tabular sheet of paper on his little table. "Have to have a look at them." Without further word, he left the

Byers at once studied the sheet, noting the three num-bers carefully. They indicated cars loaded at Swaim, destined for Potterton. In a jiffy, O'Shea was back, and

with him came another man.

"College bhoys, wantin' a ride with a good man," said O'Shea, motioning to Jim and Billy, climbing up into the crow's-nest.

"Be sure they pay their fare," grinned the newcomer, winking at Tim. It was Orson Marsch, agent at Swaim.

"Now then, where's the consist? Let me have it."
He took the paper, left the car, and in a moment O'Shea,

with a quizzical glance at Jimmy, followed. Sharp at three o'clock the engineer blew his whistle, far up ahead,

three o'clock the engineer blew his whistle, far up ahead, and there was an immediate jerking and rattling that came running back to them. The caboose squeaked, lurched and then started rolling slowly. Tim O'Shea came in from the rear steps, placed his consist on his table with a lantern on it to keep it from blowing away, and went back out to the rear platform.

At once Jimmy jumped down from the little loft, lifted the lantern and studied the sheet. Car No. 864 was listed as before, bound for Potterton. So was car No. 868. But car No. 941's listing had been changed by the addition of a single letter. "W" had been written in just before "Potterton." Satisfied, Jimmy put the lantern back on the sheet, and once more climbed aloft. "One car's to be dropped at West Potterton, three

"One car's to be dropped at West Potterton, three miles this side of Potterton, on the side of the mountain,"

he whispered to Billy.

And a little later, to old man O'Shea: "Why did you change one car from Potterton to West Potterton, Mr. O'Shea?''

"I niver," replied the old conductor. "I niver," replied the old conductor. "That's the agent's change. But I don't know," he added, staring hard at Jim, "whether he changed it on the other copies of the consist that go into the road records."
"What time should we reach West Potterton?" Jimmy

"Oh, let's see—we have to stop half an hour or so and break the train at Puddy," said O'Shea. "No other stops. We should make West Potterton before three in the mornin', now.
"What's there?"

"Only a sidin' and an empty old fact'ry.

The boys were too nervous to appreciate the beauty of the ride through the mountains at the sunset of the August evening. But they did make friends with a young Irish brakeman named Mike Moynihan. And at Puddy, while waiting for their supper around nine o'clock, Jimmy found a telephone and called up Charlie Allison.

[CONTINUED ON PAGE 463]

Your Handwriting and You

What are the secrets of character that you reveal in everything you write?

By Pringle Barret

ITTLE do you realize the dangers that beset you when you write your name. There may have been a time when you could dot an i or cross a t in any way you chose and be perfectly sure that you were revealing no deep secrets, but such a thing is no longer possible. There have arisen in our midst certain mysterious people who call themselves graphologists and claim that they can tell us all about graphologists and claim that they can tell us all abourselves by looking at our handwriting. Graphology, they say, is the science of reading character by handwriting. That in itself might not be so alarming were it not that these people make their claim good. I know this to be a fact from my own personal experience. I had my handwriting read by one of them. It was a complete shock. I resolved to be no longer ignorant of the way in which character shows in handwriting, and I immediately began to study the subject. It is a long task, but it repays the student a thousandfold.

One of the first things to learn is that very fine writ-

One of the first things to learn is that very fine writing, copybook writing, indicates a rather weak-willed ing, copybook writing, indicates a rather weak-willed individual with little personality. Encouraging news for some of us, no doubt, who are not proud of our handwriting! But it is unwise to jump to the other extreme and suppose that the worse we write, the more personality we have. An illegible hand is a careless hand and is often responsible for things that the possessor lives to regret. An amusing story is told of Sir Henry Irving, the famous actor, who had a notoriously illegible handwriting. One day he wrote a note to one of the members of his staff dismissing him forthwith and in no uncertain terms. The staff member left, one of the members of his start dismissing him forth-with and in no uncertain terms. The staff member left, but he used his note of dismissal as a pass to Sir Henry's theater for the next twenty years or so! It worked. The man at the box office knew that Sir Henry had written something, but he could not tell what.

What Your Signature Reveals

Graphology concerns everybody. Once you begin to think about it, you realize its tremendous importance. Every bank in the country, for instance, requires a person's signature as a means of identification. Moreover, a person's signature is never exactly the same twice. But it always reveals the same characteristics so long as the characteristics remain unchanged. From the graphologist's point of view the signature rrom the graphologist's point of view the signature is the most important part of a handwriting. It is more habitual than anything else and hence gives the graphologist a glimpse of the real individual when he is, so to speak, "off his guard."

There are many different kinds of signatures. Some slant upward to the right, indicating ambition and a certain amount of optimism. When the rest of the handwriting has a given base-line and the signature.

certain amount of optimism. When the rest of the handwriting has an even base-line and the signature slants upward it generally means that the writer has not fully realized his ambition but still hopes to do so. An example of this is the writing of Robert Louis Stevenson, shown on the next page. Opposed to ambitious people are certain others who have a rather fatalistic attitude toward life. They are inclined to

Employers can tell much about persons they are hiring from their handwriting



be somewhat pessimistic. The signatures of such people slant downward. A good example of this is the one written by the late Thomas

Some people sign their names and underscore them

Capitals

Finals



A knowledge of a prospect's character, gained from his handwriting, has helped many a salesman

with a plain straight line. They are generally people of some importance with a reputation to live up to. An example of this is Christopher Morley's signature. Occasionally we come across a signature that has some original or outlandish flourish. If the writer always signs his name that way, it indicates originality of a very high order. Sometimes it shows genius—as in the case of Thomas Edison.

Single Letters Are Important

But signatures are not everything in graphology. The individual letters have a conspicuous position and the most important individual letter is the t. the next page you will see a chart of ten different kinds of t's. You will notice that the first t is crossed with a rather long straight bar at an average height on the stem. That indicates that the writer is determined. In two the bar slants upward to the right and crosses the stem also at average height. This shows ambition. In three the bar is like that in two except that the slant is downward, showing dogmatism. When I first learned this I had to chuckle to myself, because I knew a man who crossed his t's that way, and nobody could be more sure of his own opinions than he. You couldn't tell him anything. He was always telling you. And he wasn't satisfied with just telling. He had to convince you. The fourth t shows a sense of humor. Five means that the writer is quick to anger. humor. Five means that the writer is quick to anger. Six indicates that he is apt to be late and seven that he is in the habit of being either on time or ahead of time. Eight has a high-flying bar showing imagination and fancy. Nine has the flattery triangle. This is not confined to the t. It is sometimes found in the downward loops of y's and g's. It means that a person is susceptible to flattery. Ten has the hook of tenacity on the end of the bar. This is not confined to the t either. It means that a person can keep at a thing until he gets it finished. until he gets it finished.

After you have looked carefully at this chart get

out some of the writing of your family and friends and look at the kind of t's they make. You will be astonished to see how closely their t-bars indicate certain traits in their characters.

tain traits in their characters.

Notice also the slant of their writing. Is it an easily flowing sort of script with a definite slant to the right? If so, the writer is an affectionate person who is ruled by heart rather than by head. Is it vertical? That shows that the writer has good control over his emotions. Is it backhand? That indicates a rather indifferent nature, sometimes even a cold one.

Spacing of letters in a word must be carefully considered, for it is a good indication of certain traits in character. When the letters within a word are placed very close together so that the style has a

Guide to Graphology

The first step in this study is to learn to look at the writing itself, its various strokes, curves, slant, proportion, etc., and not even to see the content of it.

Slightly to the right—affectionate, warm-hearted, approachable. Vertical—head rules heart, not diverted by sentimental considerations. To the left—cold, indifferent, calculating. inconsistent, sometimes ruled by heart, sometimes by head. Sometimes to right, sometimes to left inconsistent, so Base Line

Writing runs uphill—ambitious, opti-mistic.
Straight line—dependable, steady nature.
Downhill—pessimistic, despondent. Large—broad-minded, interested in large affairs.

Medium—neat, orderly, modest.
Small—power of concentration, interested in detail, discriminating.

Wide apart-generous, liberal, some-times superficial. Medium—careful in money matters. Very close—miserly.

Connections Words joined together-logical, deductive.
Space between letters—intuitive, impulsive. Well-made and simple-good taste,

culture.
Like printed letters—poetic or artistic.
Original-looking capitals—different,
striking, original.

Ascend vertically or nearly so, high above writing—love of the mysterious.

Sharp, straight finals where should be a loop like y and g, etc.—independent, not easily swayed by others, stubborn. Chopped off finals—economical, thrifty, avaricious.

Dashes substituted for punctuation marks Punctuation

Very fine writing—spiritual, delicate, gentle nature. Even-pressure writing—energetic. Thick, heavy writing—firm, not easily swayed by this and that, sometimes Thickness

Copybook writing-no real strength of character. General Style Individual

a, o, d, g, open at the top—frank, open nature, hard to keep secrets.
 Letter d has small backward curl, known as the "literary d"—talented, cultured, refined, poetic and literary ability.
 n shaped like a u—kind, good-natured. t crosses wavy—humorous, witty, jolly.

Followed by sharp dot—resistant. Very vertical flourish—independent, strong character. Such people care very little for applause and will work Signatures

things out their own way.
With great flourish—sometimes indicates ability and sometimes desire to be appreciated.
With flourishes above the name—over-

developed imagination.

Wavy bend on signature—humorous.

Signature without dot on end—unsuspicious, perhaps a little too credulous.

cramped appearance, the writer is usually selfish, often stingy in regard to money matters, secretive and sometimes bigoted. If there is little space left between the words themselves these characteristics are in-tensified. On the other hand, words reasonably far apart and letters within words evenly spaced show the writer is apt to be generous, conscientious and sincere. If the spaces are very wide and more or less uneven, sincere. they point to a careless, slovenly person who takes the easiest way and doesn't concern himself with the consequences
the spacing of lines of writing is an index to character.
When no part of the words on a top line touch any part of the words on the line below, the words on the line below, the writer thinks with great clarity. Conversely, if the downward loops of g's and y's on one line overlap the top loops of the l's and t's and h's and k's of the line below, the writer is apt to be easily confused. You could drive him fused. You could drive him into a trap in an argument. It is reasonable that this should beso, for if in writing you allow the letters of words to get in one another's way, you will be apt to let ideas get in one another's way too. Look at the handwriting of the smartest people you know and you will observe that their letters do not observe that their letters do not overlap. This sign, for in-stance, is practically never present in the handwriting of

lawyers.
A hail-fellow-well-met sort of person generally writes in rounder letters. He has a kindly, easy-going, open na-ture. An angular style indicates

that the writer is quick and somewhat nervous. He may be witty. He may be sarcastic. He is seldom just humorous. If the angularity is very marked he is inclined to be cranky, ill-tempered, very imaginative and some-what irritable. If the letters are well formed but somewhat angular and pointed the writer is high strung, and may have unusual mental powers.

Graphology and Character

The size of the writing is another important factor. People who pay a good deal of attention to details and have a difficult time thinking of things in the large, so to speak, usually write small hands. Such is the script of the famous author, A. A. Milne. You would expect that the tamous author, A. A. Milne. You would expect that anyone who writes so subtly and so delicately as Mr. Milne would have a care for details. And he certainly has. Just look at his handwriting. Conversely, large writing indicates that a person is not interested in details. He feels at home when he is planning some tremendous undertaking or when he is putning such plans into execution. Such is the writing of Gen. Leonard Wood. It plainly bespeaks an executive, one who never loses sight of the scheme as a whole and who leaves the minor details of his scheme to his subordinates. tails of his scheme to his subordinates.

The more you study handwriting the more you realize

that graphology is a very real help to many people. We all want to understand ourselves and we all realize that it is a difficult thing to do. We need someone to explain us to ourselves. That is difficult, but through the medium

of handwriting it becomes much easier. Suppose, for example, that you were just starting out to be a salesman and wondered how you were going to convince your prospect that what you were selling was just what he wanted to buy and what in fact he could not afford to be without. What would you say first? What was he most interested in? What sort of man was he? These are terested in? What sort of man was he? These are very real questions that any salesman, even an experienced one, wants to know. But how can you find out? The answer is easy. All you have to do is to know some principles of graphology and get a sample of his handwriting before you go to see him. Or if you haven't time yourself, take his handavriting to an expert for an analysis. Some of my clients do this regularly.

Or suppose you had a more personal problem and thought that you didn't get along very well with

thought that you didn't get along very well with

your link Frittfully yours Christopher Morley An underscored signature shows Thomas a Edison. strange flourish, like this of omas Edison's, indicates origi-nality and even genius THE A. A. Milne's small writing shows

General Wood's writing shows

people. You felt out of it. It is a simple thing to get somebody to read your handwriting, but like so many simple things it is extremely valuable—just because one of the hardest and most important things in life is to understand ourselves and know what we are fitted to do in the world and how we can improve.

Not very long ago I had a most in-teresting letter from a boy's mother. She

sent me a sample of his handwriting and asked me to analyze it for her.

"My son John," she wrote, "is very anxious to go to college. He has done well in his studies and wants to take up engineering. I do not know whether we should send him or not. It would mean a very great sacrifice for us as we are far from wealthy. But it would be possible with hard work and denial at home. I have heard so many people say that it is not every boy who should go to college, that I feel much troubled. Last week there was a lecture here by a college professor. After the talk I asked him professor. After the talk I asked him what he thought about it. He said that many boys went to college who were not really suited to it and that for them he believed it was a bad thing. Much better go into business right away,' he said. I don't know what to do. John is very anxious to go. Does his handwriting show that he would benefit by a college education?'

Of course, it is extremely difficult to answer a letter like this. In this particular case, however, John's handwriting, which you will see in the lower right-hand corner of this page, is of such superior quality and shows so much intellectual curiosity that a college education would mean a great deal to him and would be worth a heavy sacrifice. John has the advantage over a large

number of people in that he knows what he wants to study. Many haven't decided yet. haven't decided yet. They have tried this and that and liked it

fairly well, but don't feel that they have found the one and only kind of work for them to follow. Perhaps you have some latent talent that you have Perhaps you never discovered. There, too, graph-ology may come to your rescue. If you have a definite talent that you do not know about, your handwriting will show it.

I suggest that you study the Guide to Graphology, printed on the op-posite page, with a good deal of care. In it I have tried to concentrate as many of the fundamental rules as I can in so small a space. Everything

can in so small a space. Everything counts, you notice. Not only your signature, not only the way you form your individual letters, but the width of your pen stroke, the kind of punctuation you use, the way you space your words, the way you form your capital letters, the way you finish off the final letter of words—all these things, small in themselves, are guides to the graphologist in search of clues to character. Sometimes, of course, you will find apparent contradictions in one person's hand. That is not to be wondered at. There are contradictions in many a character as well—often they baffle the character as much as anybody. It is up to the graphologist to determine, as carefully as he may, which one of two conflicting traits may outweigh the other.

There is nothing especially new or startling about

graphology except that it is becoming more widely known and appreciated than it has ever been before. As far back as Roman times Suctonius, the historian, saw a relation between handwriting and character. He recorded the peculiarity in the scripts of different rulers. For instance, he noticed that Augustus did not break a word at the end of a line and carry over a syllable to the next. He wrote the left-over syllable under the word and connected them by a hook. The first book that appeared on the subject was written by an Italian named Camille Baldo. It was published in Italy as long ago as 1622. Since then there have been numerous books in many different languages dealing with the various intricate details necessary to master, if one would be a really expert graphologist. A year or two ago there was really expert graphologist. A year or two ago there was published in this country a book by Edgar Allan Poe, containing many analyses that he had made of the hand-writing of his famous contemporaries.

Elizabeth Barrett Browning showed her knowledge of raphology and her interest in it in these lines from Aurora Leigh":

"I know your writing, Romney,—recognize The open-hearted A, the liberal sweep Of the G. Now listen—let us understand: You will not find that famous deed of gift Unless you find it in the letter here."

The list of famous people who have concerned them-selves with graphology and believed it to be a valuable study is long and fascinating. There was Leibnitz, the famous mathematician, as great a man in many ways as was Sir Isaac Newton. There was Benjamin Disraeli, the famous liberal Prime Minister of England during the reign of Queen Victoria. Among the men of letters who believed in the connection between the handwriting of an individual and the individual's character were Sir Walter Scott, John Keats and the great German poet Goethe. Professor Fischer of the University of Prague and Professor Benedict of the University of Vienna vere two more.

Happily, it is not necessary to be famous in order to be good graphologist. A real interest in the subject, a a good graphologist. A real interest in the subject, a
determination to master some of its simple rules, and a
good imagination, which will help you to connect facts
which at first do not seem
to be related—these are the

vital traits you need if you are to make a success of interpreting the character of people by the signs they reveal when they write their names.



The most important individual letter in graphology is t. Here are ten different kinds: 1, the determined t; 2, the ambitious t; 3, dogmatism; 4, humor; 5, the angry t; 6, procrastination; 7, panctuality: 8, the high flying t; 9, the flattery triangle; 10, the hook of tenacity.

A Hobby for Everyone

Graphology is a fascinating hobby for anyone, young or old. Many a time it comes or old. Many a time it comes to the rescue at a party where people do not know each other very well and do not seem to be having an especially good time together. If someone knows enough about graphology to begin numor; 5, the angry t; 6,
7, penctuality: 8, the high
tery triangle; 10, the hook
of tenacity

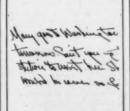
of the guests it is sure to get
everyone interested at once and by the time all the people

have listened to and commented on the analysis of each other's handwriting the former stiffness of the party will have vanished. It is amazing how quickly and how surely the analysis of handwriting brings informality and ease into a group of rather stiff people. It is a very good way to insure popularity. If you know how to read character from handwriting you will be in demand at any party you happen to go to. You can turn your ability to account too at church fairs and other entertainments. It is a good way to earn money for your school or your club.

Indeed I know of one graphologist who met all her college expenses for a whole year simply through the exercise of her ability to read handwriting.

bater then

heard. That we are to night. Don't you t for ? Wagaert sail t and that they would for the season, this



think it would be very study on the little woon be for the last time. She 1 to go at all I con laughing at the way she

This handwriting, that of a boy who wants to study engineer-

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Strictly Business

RS. JORDAN, returned from the motor trip, listened to Joan's account of her conquest of the Prowling Lady with an air of absent-minded detachment that relieved Joan but also puzzled her. "You're wonderful, Jo," sighed Mrs. Jordan, and then she smiled brightly. "Perhaps I can be wonderful too before long. In fact I've already

"Oh, Mother!" cried Joan in alarm. "Not a school job? Noth-ing that will take you away from Gran and Johnny and me—and Deepdene?

No, indeed!" said Mrs. Jordan airily. "Now don't bother me about my plans, dear. I haven't bothered you about yours." This was true enough, and Joan

This was true enough, and Joan said nothing more. She was too busy wondering what the Prowling Lady's job for her might be, and what the Herald's owner had wanted of her, and trying to work up some more leads of her own for fall, to notice anything queer in a trip which her mother made downtown next morning, and from which she returned in a state of happy excite-ment. There was really nothing queer in that; shopping always pleas-antly excited Mrs. Jordan.

antly excited Mrs. Jordan.
Three days went by
with no sign from the
Prowling Lady, and then
inquiry at the Inn disclosed that she had left in a great hurry, having re-ceived a telegram about an important auction of Much disap antiques. Much disap-pointed, Joan counted the days until the probable return of the Herald owner from his vacation and decided to wait for him and his need of her

him and his need of her
services, meanwhile getting caught up on neglected garden work, the canning of
vegetables, and other home chores, which had piled up
alarmingly while she was away at camp. So she was
out in the garden pulling beets and carrots when Sylvia
Cain came with a big pail of blackberries to sell.
"Hello, Sylvia!" she called. "I want four quarts for
jam. How are you these days?"
"Oh, so-so," said Sylvia glumly, and waited in sullen
silence while Joan got a dish for the berries.
Sylvia was a big, strapping girl, a few years older than
Joan. She belonged to the thriftless tribe of Cains, who
lived on, and off, a stony worn-out farm up Old Hill way.
Her father and her brother Sam worked their land in a
casual, easy-going fashion of their own. Sometimes, casual, easy-going fashion of their own. Sometimes, when money was absolutely needed, they hired out to some trusting farmer who didn't know the Cains' repusome trusting farmer who didn't know the Cains' reputation for being the slackest workers round Hillsboro. But at fishing and trapping and hunting you couldn't beat the Cains. Sylvia was the same sort. Her house-keeping was slipshod and offhand: the scorn of her thrifty neighbors. But she could "fish down" either of her men folks. She knew where all the wild berries grew thickest and finest, and she could pick twice as many in a day as any of the careful, industrious house-keepers who despised her for a shiftless, gypsying Cain. Joan wondered what had happened today to make her so sober.

so sober.

"Know where you're going to sell the rest of your berries?" she asked. "Because if not—"

"Oh, sure, I got most of 'em promised," sighed Sylvia.

"But what's the use? I'm sick of pourin' water into a hole, I am. Sam had his radio took back by the store last week, but still he owes on it to the loan company. If he don't pay, I guess we'll lose the farm."

"Oh, no, Syl!" cried Joan. She couldn't imagine that farm without the Cains on it.

"Will too," snapped Sylvia. "Old rattletrap houses like ours, up on hills where the wind shakes the bones

By Margaret Warde

ILLUSTRATED BY D. S. WENDELL



out of you in winter and out ot you in winter and there's a sightly view—that's what all the city folks want now'days. That loan shark meant to git our farm, and I guess he will all right."

Tell me about it, Syl," said Joan, sitting down on

the porch edge.

Sylvia sat down beside her. "Sam wanted a radio awful bad. So he borrowed the money and thought he could trap it out. But he didn't have no luck with his furs; and besides, where he thought he was borrowing furs; and besides, where he thought he was borrowing fifty dollars it proved to be most a hundred." Sylvia laughed suddenly, a hard, curt laugh. "Mis' Stebbins says those that borrow of Grasping Goodwin, why, the more they pay up the more they owe down. I guess she knows. He got their farm."

"Then they must have mortgaged it to him," said Joan, who understood much more about business than most girls of her age. "You haven't mortgaged yours, have you? Not for a fifty-dollar radio?"

"I don't know," replied Sylvia, somberly, "but I do know Sam signed some things I wisht he hadn't."

"Oh, Syl," cried Joan, "what a shame! Why didn't you borrow of Mr. Stephen Adams at the bank?"

"I don't believe he'd lend it—to a Cain," said Sylvia. "Anyway, all my berry money's got to go to help Sam fill up his hole, and then I bet it'll be as deep as ever."

"Sylvia!" Joan's voice was tense with carnestness.

"Sylvia!" Joan's voice was tense with earnestness.
"You get the papers Sam signed and I'll take them to
Mr. Adams to look over. He's awfully kind, and he's
shrewd too at seeing ways out of a mess like this. He'll do all he can to help you. And next time let me ask

"There won't be a next time," said Sylvia. "Some folks can seem to have things 'thout payin' for 'em, but we Cains can't. We got to do without. Dad and Sam and I know that now." She stood up heavily. "I'll tell Sam what you say. Once old Mr. Thompson told

him never to write his name down on the right-hand side of a paper 'thout readin' it all through careful, to see what he was down for. 'Sign all you want on the left side,' he said, 'that's jest witnessin'. But go careful on the right.' Sam's a very rememberin' trapper. He'll know where he set every trap on the longest line, but he forgot in that story whether 'twas left or right to go careful on. He signed on the right, and so did my dad.'

HEN the afternoon mail came, Joan had a letter from Edwina Oliver. As she opened it, a check for a hundred and six dollars fluttered out. "Dear Joan," wrote Edwina, "will you be an angel and take this money to Jasper Goodwin's office—it's over the kodak shop. Before you give it to him, make him sign a receipt for all I owe him. You know my red Ford that drove Uncle Steve crazy? Well, one day when I was learning to drive it a tire went pop. That Peters boy didn't have any money, and naturally I was stony-broke after paying for the car, so he said to borrow of Jasper Goodwin—that everybody did. Well, I borrowed twenty dollars and forgot it, and yesterday a sheriff came and tried to collect of Dad, who comes into it because I'm not of age. Dad says, 'Pay it and say nothing, for you can't fight a loan shark.' But he wants a watertight, air-tight receipt. Whatever you do, don't tell my relatives. I'm coming East this fall, and we'll have another March Hare run, won't we?' Was Sylvia's Grasping Goodwin the same as Edwina's Jasper, Joan wondered. Of course he was! The only Mr. Goodwin Joan knew THEN the afternoon mail came, Joan had a letter

Mr. Goodwin Joan knew was a hatchet-faced youth who drove around in a low-hung yellow road-ster. Could he have money to lend to everybody? Once at a dance at the lake he had asked Ann Hawkins to dance. Ann had refused with a

polite lie about having the dance engaged. She'd said, Joan remembered, that Mr. Good-win had been in a real-estate deal with her father, and that her father didn't like him and wouldn't want her to dance with him.

Probably then, Joan decided, his office was no place for her to go alone. She considered holding Edwina's check until Sylvia had brought Sam's report and she had all her data together.' Then she remembered how slow the Cains

were about seeing to everything except
woodland matters, and she also remembered that, while
she intended consulting Mr. Adams about the Cains'
troubles, she mustn't let him know about Edwina's debt. So she decided to get that off her hands at once. She called up Tony Hawkins.

"Tony," she began, "would you go to a Mr. Jasper Goodwin's office with me? On an errand for Ed-

"What have you or Edwina to do with Grasping Jasper?" demanded Tony. "Honest, I don't mind Edwina's being crazy-headed, but can't you advise her not to have any dealings—"
"It's all done, Tony," cut in Joan, "and her father has advised her how best to end it."
"Come for you in the care in five minutes." Tony

"Come for you in the car in five minutes," Tony

Mr. Goodwin's yellow roadster was parked in front of the kodak shop. Tony pointed it out angrily. "He didn't have a cent two years ago. Now he's driving a foreign car, and his company owns this building and any number of farms round here, all because people are so casy. Lately he's been giving some folks such raw deals that Dad says the Chamber of Commerce is going to try to get something on him and invite him to leave town. It's outrageous, the interest he asks! There's no law It's outrageous, the interest he asks! There's no law against it except on land mortgages, and there he gets around it by taking a service charge. Six per cent interest and six per cent for the accommodation!"
"Tony," said Joan suddenly, "I've had an idea. You wait for me here. I'll be all right in that office. Give

me—"
"Ten minutes," said Tony severely, "and not one

second more."

Jasper Goodwin was dictating a letter when Joan gave his door a determined push. His feet were on the desk

and his chair tilted dangerously, but he jumped to his feet

"I've come to pay this," said Joan calmly, holding out the check. "But first I want a receipt in full to date."

Mr. Goodwin took the check, looked from it to

oan. "Just one minute, Miss-er-Oliver," he said. Mi s Pickett, look up the Oliver account. Won't you

"There seems to be an extra dollar and ninety-eight cents due, Miss Oliver," Goodwin announced at last.
"For the time elapsed since sending out your account—

nearly a month, I believe."
"Very well," said Joan, who had been prepared for such a demand, and she handed him two dollars. "Now will you please give me a receipt in full and a special receipt for the extra money?"

receipt for the extra money?"

"Any time we can help you out again with a little loan, Miss—et—Oliver," smirked Goodwin, as he handed her the receipts, "we'd be only too delighted. Youth and beauty, you know!"

Joan flew back to Tony. "He doesn't know me! I thought he wouldn't. I'm going to apply for a loan and find out all his tricks. Why, he ought to be in prison! Tony, let's go right up and see Sam Cain, so we can get Mr. Adams started straightening out their troubles."

fr. Adams started straightening out their troubles." It didn't need Mr. Adams to assure Joan that the Cains It didn't need Mr. Adams to assure Joan that the Cains had signed a mortgage. Sam confirmed what Tony had already told Joan, that all the important papers would be in Jasper's hands. But Sam had some receipts for "interest on mortgage," and he had, as Sylvia had said, a good memory, except that it had lapsed on that important distinction pointed out by old Mr. Thompson between signing on the left and on the right. One thing both he and Sylvia were sure of if the November interest wasn't paid: Goodwin's debt for wasn't paid: Goodwin could foreclose. Somehow the fifty-dollar radio had put Sam in Goodwin's debt for nearly two hundred dollars. And, as Sylvia said, it might just as well be two thousand for all the chance they had of paying it, with the ruinous rate of interest

they were being charged.

Joan went home—it was after banking hours, and she would wait till tomorrow to speak to Mr. Adams—and burst out with her tale of the mess the Cains were in. Mrs. Jordan listened in silence, a queer look on her pretty

"You don't mean the company called 'Loans for All'

"No," said Mrs. Jordan shortly, "I haven't," and went

off upstairs.

EXT morning Joan went to see Mr. Adams. But first she called up Tony Hawkins again. "Tony," she began, "you know how you love to dress up and act in plays? Would you help out by doing that in this Cain affair? I've got a wonderful plan if Mr. Adams

"Got a plan myself," declared Tony eagerly. "To have a fellow from school, who summers over near Hillsdale, come and try to borrow, first having been coached by my dad on the loan laws of the state, so he can get Grasping

Jasper."
Mr. Adams sighed deeply over the Cain affair.
"They've done it, Jo! I sit here in this window and
watch all the thriftless, heedless down-and-outers in
the county start up to that confounded office. You'd
say they haven't anything to take, but Jasper bleeds 'em
all the same. And people with assets,—people who have
a right to borrow and that we'd be glad to accommodate,
—they go there too. He's a crook, Jo, but he's smooth,
and he's got two or three smooth citizens in as directors
of this crook company. Some day they'll have to face
the music. Right now, if we knew all he's done, or the
worst of it, we could scare him good and plenty and get
rid of him—the curse of the county, he is!" Jasper.

Joan explained her plan as she had combined it with Tony's suggestion. "First I thought I'd get Tony to go with me, to be the garage man that I'm supposedly buying a car of, and I haven't the money I need to pay down on it. But this Tom Carter, if he's smart enough, will be safer, because Tony'd have to disguise himself a lot, to avoid being recognized. You see, my idea is to get Grasping Jasper to propose something illegal and have the papers all ready to sign. But before I put my name down we make an excuse to phone somewhere, and that will be your signal to walk in and hear what he's Two witnesses and the paper against one.

"Capital idea!" cried Steve. "I guess we old fellows are slow not to have thought of it. Another bad feature of this game, Jo, is the stock-selling campaign Goodwin's put on. You'd be surprised the rich farmers and the women that fall for his letter telling about the big

dividends his company pays and the profits the stock-holders will presently have to divide."

"You mean," asked Joan, "that he sells shares in this thing to respectable people—that it's other people's money that he lends, not his own?"

"Exactly. And they'll never see a cent back on their gilt-edged investments."

Joan's face lengthened suddenly. "I—must go—now," she said unsteadily. "I've got—something to see to at

"Well, you get this little drama of yours planned as soon as possible," Mr. Adams instructed her. "We slow-pokes here at the bank and the Chamber of Commerce

pokes here at the bank and the Chamber of Commerce will take off our hats to you if you rid us of Goodwin. And we'll open our pocketbooks too—we can well afford a handsome fee," he added.

"That's fine," said Joan listlessly. "I'll go right ahead on it. But I can't stay now."

She couldn't get home fast enough to ask Mother whether her "wonderful" stroke of business had been the purchase of stock in Mr. Goodwin's company. It had been just that: a thousand dollars' worth. Mrs. Jordan had taken money that had just come in from the redemption of a bond and bought ten shares of stock at par.

I shall go and ask for the money back," she said. I shall tell him I don't like things I hear about hi

And she did go that very day, and again the next day.

Mr. Goodwin's stenographer reported him out once and in conference the second time. Joan wasn't disappointed: if the thousand dollars could be pried loose, it wouldn't

be by merely asking for it.

Joan went straight to Mr. Adams with this news.

"You get Tony to ask his dad what you can do," he

advised. "You must be well primed to make any headway with Jasper Goodwin."
"That's what I tell Tom Carter," said Joan. "He's crazy about the play-acting part, but I've got to be sure we understand just what we must get Mr. Goodwin in for." [CONTINUED ON PAGE 466]



"Hold up yer bands, Jasper Goodwin, 'n' tell me whar you keep yer mortgages! I wouldn't set 'n' let a varmint hurgle my house, 'n' I won't let a varmint steal my farm! You tear up the mortgage 'n' I'll lower my gun'

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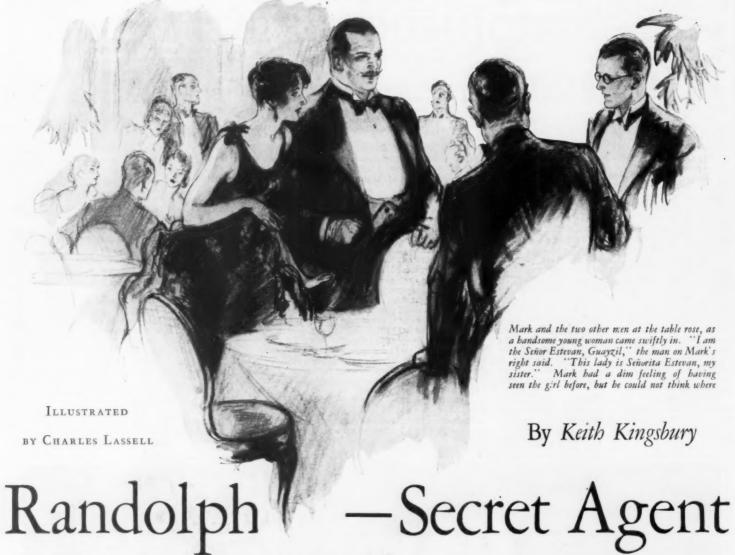
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A QUICK SUMMARY OF WHAT HAS GONE BEFORE MARK RANDOLPH, barred from the Army by defective eyesight, leaves his home in the Middle West to seek a diplomatic career in Washington. On the train he meets Ellery Holmes, a young aviator on his way to fly an air-mail route in South America. He saves Holmes's bag from a thief, and in return the young aviator invites him to fly with him from New York to Washington. During the flight Mark receives a first lesson in pilotting. At Washington he meets with no success in his attempts to enter the diplomatic service and goes back to his hotel tired and discouraged. There he picks up the telephone to call an old friend of his father's, but before he can give the number he is cut in on a busy line. He overhears a conversation in Spanish that mentions the intended assassination of the Guayzilian Ambassador. It is of such importance that Mark decides that the Secret Service should know about it at once. He is refused entrance to the office of Willard Slyne, the head of the Service, but bursts past the guard and gives Slyne the information. There is trouble between Natria and Guayzil, and Slyne, in return for the important information which Mark brought him, offers him a position in the Secret Service. His first assignment is to wait in a hotel room with the earphones of a dictograph clamped over his ears, listening for further clues to the activities of the Natrian conspirators. He tries to get Slyne on the telephone, but is unable to and decides to take matters into his own hands. He finds the house, on the outskirts of Washington, and from behind a curtain watches the payment of thousands of dollars to some person unknown. In the darkness he inadvertently steps on a cat, whose howl betrays his hiding-place. A hand thrusts the curtain aside, and Mark faces the muzzle of an automatic and the command "Hands up!" Mark, feeling that these men value secrecy more than anything else and would be afraid to fire at him, turns and flees. They follow him into the street, where he leaps on t A QUICK SUMMARY OF WHAT HAS GONE BEFORE

fully locked and the documents concealed in a money belt strapped to his waist, he goes to bed believing that the dangers of the trip have not yet begun. Hours later he wakes suddenly to find the room quiet and still in darkness. Then he hears a scratching noise, and realizes that the locked door between his room and the next is slowly opening.

CHAPTER FIVE

Mark Sees a Finger

SPRINTER beats his best track time when he runs for his life. Mark usually thought fast, but now his mind raced with the speed of light. A burglar after money? Or a Natrian after a document? Lie still and see, or raise

after a document? Lie still and see, or raise an alarm and frighten him away? A Natrian would undoubtedly be satisfied with the dummy document in the coat, and leave—that, way lay safety. But once the dummy document was opened the mythical "they" who stole it would know before his journey commenced that he had prepared for theft! If all Natrian patriots could be kept in ignorance of his preparedness, he had at least a slight advantage. If he raised an alarm, caught the thief in the night, then what? vantage. If he raised an alarm, caught the thief in the night, then what? The door was now wide open. Through

The door was now wide open. Through it Mark saw only blackness; yet the shadow seemed deeper in one place. Shivers chased themselves up and down a goosellesh spine as the darkness resolved itself into a figure. Mark could not determine if it were great or small, thin or large. A mere blob of blackness moved cautiously across the floor. It did not walk, it did not run; it glided—like a ghost, thought Mark.

like a ghost, thought Mark.
Suddenly a tiny flash of light appeared,
a mere glowworm. But Mark's eyes
were large with darkness and fear; in

that instant he saw what, in spite of common sense, chilled him to the bone. The black figure held the dim light in a black hand—if it was a hand—and it had

Slowly, noiselessly, the nebulosity drifted across the room. The tiny pencil of light played on the bed, momentarily on Mark's face; he shut his eyes just in time. Then as he peeked he saw it spot the coat on the chair, the papers sticking out of the inside pocket.

As the black formless feeler which should have been

As the black formless feeler which should have been a hand stretched forth towards the paper, Mark acted. Ghosts do not have hands! He hurled a pillow at the shadow with all his might. With the motion he sprang out of bed and threw himself upon the figure. As he landed, he yelled as much in satisfaction as in relief in action; for this was no ghost, but human.

A stifled, womanish shriek, a stunning blow on Mark's head from some hard object—and the blackness was gone. Mark grabbed his coat with one hand, felt for the light switch with the other; the room flashed into illumination. Mark's spring for the unaccountably opened door was checked just in time. The door was shut—and locked!

Head ringing with the blow, Mark

Head ringing with the blow, Mark unlocked the door to the hall, but no figure ran down the corridor. He tried the door of the next room; it was locked. Stay in the corridor and watch? He could not remain indefinitely in a doorway, clad in pajamas, holding a coat! If he stepped back into his room to dress, he gave the thief opportunity to escape. Telephone the office? He jumped for the phone—then put it down unused. No! What use? What could he prove? They would say he had a nightmare; nothing was missing. The door between the rooms was locked. He could not sustain a charge of burglary! And if he could, it meant



Promptly at six bells in the morning Nogi knocked on Mark's door

missing the boat, police-to what end? Delay in de-

missing the boat, police—to what end? Delay in delivery of the papers—the very thing Natria wanted!

Mark closed and locked his door softly and laughed silently. "I'll bet the Secret Service doesn't usually use pillows for weapons!" he thought. "I wish I had a gun. No! It's wits, not force, must get this through. To shoot someone is to invite delay, search, imprisonment—better without it!"

THE Natrian S. S. Cleo did indeed sail from Hoboken.
"The kid knew his New York!" was Mark's thought as the hotel porter told him how most easily to reach the dock, via tube. He was early on board; nothing held him in his hotel, and his shopping was all done. His head still ached from the blow, and he shought some fresh air might cure it."

thought some fresh air might cure it."

Cleo bulked some five thousand tons; a single-screw steamer, comfortable for travelers. A single-cabin craft makes for friendly intercourse on shipboard, if not for exclusiveness; Mark looked with interest at the few fellow passengers leaning on the rail, watching last-minute loading. He explored thoroughly the cabins, the companionway, the dining-room, the passages, baths,

purser's office, entrance to engine room; in an hour Mark could find his way anywhere on Cleo where passengers were permitted. He secured his deck chair, and had the deck steward place it on the port side, that he might be out of the afternoon sun when the low latitudes were reached

His cabin was outside on the upper deck; Mark was not pleased, because it seemed to him a simple matter for anyone to make a burglarious entry through the sliding window. Yet it was more easily within observation than an inside cabin door would be.

Getting under way was fascinating: the puffy little tugs which took the great ship out into the middle of the Hudson and pointed her safely down; the pas-sage of the Narrows, Bed-Island with Liberty holding her torch high aloft; the crowded shipping, the many whistles, the barges, tugs, launches ping, the many whistles, the barges, tugs, launches, a battleship making stately way up the East River to the Brooklyn Navy Yard—all were intriguing even to a lad who had seen the ocean from the ship deck many times. He stood in the bow for

He stood in the bow for hours; not until Cleo pointed her nose to an indefinite horizon line, and a lift and fall beneath him that the last lightship meant open water ahead, did he go back for further information about his new environment.

Cleo was smartly painted; her stewards and painted; her stewards and deck crew were trim in clean white uniforms. Quiet efficiency, smiling dark faces and obliging service were on call for the passengers. Mark felt a pang in his inner man, and spoke to the steward: "Dinner?" Dinner?

Four bells, Señor! But tea-it is serve now in main cabin. You have the sitting?'

'Sitting?" "Place at table. purser, he will arrange!" Mark knew enough not to tip; tips are for the end of the voyage. In the purser's office he was assigned to table 5, seat 3. Then he went to his cabin for a book; tea did not appeal to him. But he had a pleasant sense of being in a comfortable home; if all Natrians were as obliging as these it should not be difficult to pass through them to Guavzil.

Dinner was interesting, not only on account of the best sauce known to man but as affording the best chance to see the majority of his fellow passengers. They appeared to be about equally divided as to race; Mark picked out a dozen he thought were natives of South America, another dozen obviously English or American, a few indeterminates who might be either Spanish or French—altogether some forty passengers sat down to their first dinner.

Captain Bomerez made a neat little speech of welcome to his passengers, then formally drank their health and wished them a pleasant voyage. Tall, dark, bearded, he was dimly reminiscent of Barros. Mark decided that to be tall and dark and bearded was a Natrian

Introductions at his table were soon made; the inevitable jolly passenger saw to that.
"I'm H. M. Gordon, machinery, American!" he

began. "Let's all know each other-" He turned

expectantly to Mark on his left.

"Mark—Marquet Randefo, born Guayzil, returning for a visit!" Mark almost gave his real name, and chided himself for his thoughtlessness. Then he and the two other men at the table rose, as a handsome young woman came swiftly in. She was dressed in black, with a touch of red at her throat. Short, boyish black hair, earrings, long tapering fingers, highly manicured, a

hair, earrings, long tapering fingers, highly manicured, a straight little nose and a rosebud mouth completed a picture Mark found charming. Her left arm was bandaged and held stiffly at her side.

The man on Mark's right introduced her. "I am the Señor Estevan, Guayzil," he said. "This lady is Señorita Estevan, my sister." Mark had a dim feeling of having seen the girl before, but could not think where. He dismissed the thought—he was always seeing resemblances which had no basis in fact.

Conversation became general: Mark found it in-

Dlances which had no basis in fact.

Conversation became general; Mark found it interesting, stimulating. Much of it was in Spanish; he said little, but tried to make that little count. He was a little piqued that Schorita Estevan paid him but scant attention, giving all her eyes and merry repartee to her brother and Mr.

Gordon.

Mark's life had been rather devoid of girls, in the companionable American way. His life abroad had given him a more formal attitude toward the feminine side of life. But he was healthy and young and reasonably good-look-ing, and more than one charmer had smiled upon him. Mark rather wished this young lady would do likewise; she looked sophisticated and self-re-liant, but there was a quality of sweetness about her face which Mark found very appealing.
"I'll bet that's a thor-

oughly nice girl!" was his inward judgment. "She looks brave and forthright as well as pretty."

Mark joined only mod-

estly in the conversation; it was foreign to all the traditions of a Randolph to force oneself forward But he hoped all meals would not be like this, in which he felt more or less relegated to the background.

Somewhat to his sur-prise, the girl turned to him as they rose after dessert. "It is delightful to meet one's countrymen here!" she said brightly.

"You go to—"
"To Guayzil, yes!" responded Mark, pleased.
"Then let us walk the deck? Yes? No? But I am afraid without an arm
—my hand—"

"I regret to see that it is jured." Mark's syminjured. pathy was very real; so real that he was not conscious of her sharp

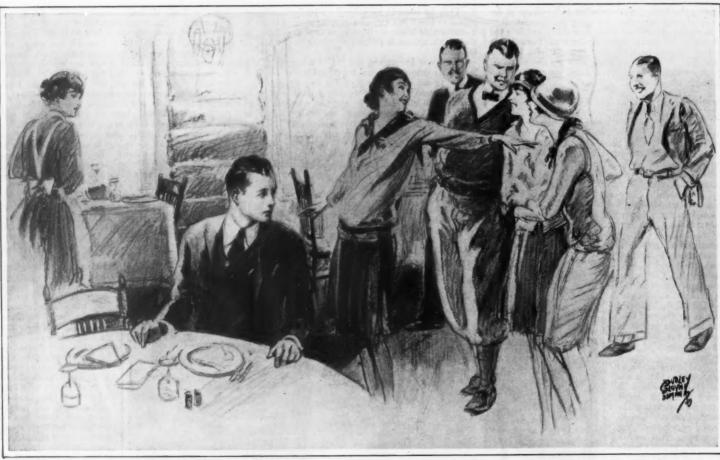
Yes. I fell. The wrist

"Yes. Ifell. The wrist, it is of the sprains. It will be well soon!"

They were joined by Señor Estevan, and the three walked the deck together. Mark was inclined to be suspicious of everyone; for all he knew to the contrary the charming señorita might charming señorita might be a Natrian and her equally charming brother a conspirator! But he had no need to guard his tongue; the conversation was only of books, music, the play, the ship, the journey; they asked him CONTINUED ON PAGE 457



Mark searched the Señorita Estevan's pretty face as closely as he could without seeming to stare. It was impossible; this lovely girl could not have been that dirty little boy!



Breakfast brought more grief. Speed should have known that Connie would talk. Of course, he refused all invitations to join in the day's fun. Then Connie, with a sharp little smirk, let him go

Money to Spend

PEED KANE came out upon the view surrounding the Cape Rest Hotel, and stopped for a moment to look about him. Yes, sir, there was the lake, just as big as the advertising folder had claimed; and the gently sloping bank, with the profusion of trees, and wild flowers.

'Nature sure does some mighty fine work up here,"

he said, happily.

His perspiring face brightened, and his shoulders snapped out of their droopiness. Great old world! He picked up his frayed old suitcase and started across toward the hotel, his good spirits helping him to forget the three wearisome miles he had trudged through the

the three wearisome miles he had trudged through the sand from the railway station.

He stood for a moment at the steps leading up to the porch. Made of logs, with the bark still on. Real outdoor atmosphere, this sort of thing. He'd picked the right place for a bully vacation.

His room that he had had reserved for two weeks

turned out to be a tiny stall in the middle of a six-stall bungalow, but it suited Speed. Fitted right in with the general scheme of things. He'd seen such rooms in picture shows. Miners and mounted police and such fel-

lows lived in rooms like this.

He set down his baggage and started out. Then he remembered that he'd better take a look at himself.

Might be a good idea to have the old personality working its best. He gazed long and carefully at himself in the checked mirror which was attached to an eight-penny and the process of the writer. This recording the penny was the process of the writer. nail by a piece of hay wire. This procedure made it necessary for him to stand somewhat on the bias, since he was fairly tall. He managed to catch glimpses of his tie and other vital parts of his costume by backing away and other vital parts of his costume by backing away and shifting from right to left. Of course, he knew well what that mirror had to tell him—well-cut trousers, No. 9 shoes, swanky suit that the boss's tailor had made for him after he had helped to save a big account in Chicago, carefully pinned soft collar, and all that sort of thing. Speed Kane was all set for his first real vacation. And he had come to a real place. Cape Rest Hotel, on the backs of the Big Bear Like beared of a threat of the statement.

the banks of the Big Bear Lake, boasted of a thousand acres of dense woods as a background; with rowboats,

By David William Moore

ILLUSTRATED BY DUDLEY GLOYNE SUMMERS

riding horses, tennis courts, dance hall, bathing beach and many other what-nots. Two weeks of this! Speed could hardly contain himself.

"I don't look so badly," he mused excitedly, as he took a last look into the mirror. "Maybe they'll think

I'm a big advertising man!"

He had arrived just in time for luncheon, which seemed to Speed to be a splendid way to start off a vacation. He was the first one to enter the dining-room, and for a moment wondered whether he wasn't going to be lonesome. But soon there came the clatter of many feet and much hilarious talking. And when the noise subsided he found himself surrounded by a gay crowd of

subsided he found himself surrounded by a gay crowd of young folks. Of course, they were not paying special attention to him. He had simply happened to take a seat at their table. Which was entirely all right, for at his left was a very attractive young girl about his own age. She promptly beamed upon him.

"My name's Connie Meadows. What's yours?"

"Edwin Kane—from Cincinnati."

"Oh!" and she smiled brightly. "Your name sounds interesting. I'll introduce you. Folks! This is Mr. Kane from Cincinnati. That's Gladys Williams there, then Helen Randall and Lucile Bracken and Roy Brewster and Tom Clark and Joe Reading—from left to right. Do we say welcome?" we say welcome?'

R-a-a-a-y! R-a-a-a-y!

She turned back to Speed. "I hope you'll feel welcome now. You've been duly elected one of the gang. Now tell us about yourself."

Speed hesitated.

"Big business man, aren't you?"
"No, not so big. That is," and Speed yielded a point to the temptation of the moment, "not so very big. I'm an advertising man."
"How splendid!"

Speed could see the well-known inferiority complex, showing through the half-hearted smiles on the faces of the other young men. This gave him not a little satisfaction. His conscience hurt him, but why not do a little

lording it, when it came so easy?

Too, he was a long, long way from the Hannibal Advertising Agency, and these new friends didn't know he was only the assistant to Herb Rowe, production manager. Also, they didn't know that he was about as much entitled to call himself an advertising man as a janitor in the White House is to call himself a membe a good swimmer, living there on the Ohio River,

you?'

"Not so good," Speed replied modestly. "Won a dinky little cup once in the hundred-yard dash. Nothing to brag about, though."
"Dance, too, don't you? And ride horses?"
"Well, I haven't so much time for frivolity back home," Speed said. "But I try to do as many things as I can. I dance usually at the Chester Park club-

Connie looked around the table with a menacing ex-

Connie looked around the table with a menacing expression. "Now, you girls, listen to me. I found Mr. Kane first. He belongs to me, and I'm going to see that he has a good time. Understand?"

The girls said something about her being selfish, and the boys laughed a bit. The fellow whom Connie had introduced as Roy Brewster stopped a fork in midair to address Speed. "Be careful, Kane. She's getting ready to shake you down for all of her incidental expenses. Everything costs extra around here. Thought you'd appreciate a word of warning from a friend." And he made a face at Connie.

appreciate a word of warning from a friend. And he made a face at Connie.

"Oh, you!" and Connie returned the grimace, then turned to Speed. "Don't you pay any attention to him. He's merely jealous, because he's such a rotten swimmer and dancer. He's even afraid to ride a horse!"

But Speed was vitally interested in what Brewster had said. "I thought everything was included in the hotel

bill," he said. "How come they charge for extras that

way?"
"Never give a sucker an even break," replied Brewster,
"is the motto of all these places. They've got to make
a profit somehow."
"Well is isn't that I care about the expense." declared

'Well, it isn't that I care about the expense," declared

ed, "but—"
'Atta boy!" from Connie.

"Atta boy!" from Connie.

"But it's the principle of the thing," Brewster said, finishing off Speed's statement for him.

Then the meal began to break up. "We girls are going horseback riding this afternoon," Connie announced. "You come along with me, Mr. Kane, and we'll shake them. I'll show you all the sights, the fire tower, the old cabin, and everything."

But Speed didn't besizes for a moment. "Sorry, but

But Speed didn't hesitate for a moment. "Sorry, but I can't go today. Got a lot of things to see to. Unpacking, and all that. Some letters to write, too."

ND so it happened that, instead of Speed's jumping And into the gay activities of the hotel gang and being the life of the party, he soon found himself back

in his room, slumped down on the edge of his bed.
"I'm certainly a boob!" he grumbled. "How could I be such an idiot? Dollar a day for a boat; dollar an hour for a horse—" He put a hand into one of his trousers pockets and drew forth a small bunch of bills and coins. Four dollars, sixty-one cents, and his railway ticket home.

If he only hadn't talked so much! Fine chance he had of pulling any broke stuff on this crowd—him, a big advertising man from Cincinnati! His life would be miserable indeed, if this crowd of young people found

out that he was only a cheap bluffer.

Then it occurred to him that perhaps he could go

without having to pay extra. He rummaged Then it occurred to him that pernaps he could go bathing without having to pay extra. He rummaged around in his suitcase and brought forth his bathing suit, a cheap affair with wide blue and white stripes. It had been one of his many bargain purchases. Bargains had always been important in Speed's life.

He looked at the suit and thought again of Connie Meadows, Roy Brewster and the others. No, it didn't seem so good. "I reckon I'd better wait till tomorrow, anyhow," he concluded. "This looks pretty—well,

He looked at the suit and thought again of Connie Meadows, Roy Brewster and the others. No, it didn't seem so good. "I reckon I'd better wait till tomorrow, anyhow," he concluded. "This looks pretty—well, pretty bad." So he lay down and tried to take a nap, which seemed to be about the only logical way for him to spend his time. When he awoke it was nearly dinner time, and he saw the other young people just going into the lake for their swim. His hunch about the bathing suit had been a good one for Connie and her agan were suit had been a good one, for Connie and her gang were all dressed like the people in the advertisements of Hawaii or somewhere.

At the evening meal the gang was in great good

At the evening meal the gang was in great good spirits, telling about the afternoon spent riding, playing tennis, swimming, and doing other expensive things. Connie suggested that Speed take her for a row on the lake right after dinner, so they could see the gorgeous

But Connie was a good little sport. She stayed and sat on the porch with Speed. And, in spite of the mis-takes Speed had made at luncheon by talking too much, he was soon telling about himself again.

"I guess the most im-portant thing I've done was to handle the Hanover campaign," he said. "That account runs up to something like half a million, you know

"Yes, of course," said nnie. "I think it must Connie. be simply great to turn out ads like those.

Again Speed let the im-plied lie go uncorrected. His conscience hurt more than ever, but he felt powerless in this girl's company. He hadn't written the Hanover ads, but he had really over ads, but he had really turned them out in plate and type form, hadn't he? Surely he had. So why worry? The copy-writers and the contact men called themselvesadvertisingmen, didn't they? And they didn't do all of the work,

either. Speed also talked about other campaigns. It

And Connie really seemed to like him very much. She mentioned many splendid ways to have fun; she gave him wonderful opportunities to share with her the good times that might be had for a little extra cash. But

Speed had to avoid entangling and expensive alliances.

That night he slept fitfully, and next morning breakfast brought more grief. He should have known that Connie would talk. Of course, he refused all invitations join in the day's fun. Then Connie, with a sharp

little smirk, let him go.

Speed felt so low in spirits that he could have ridden an elephant under one of the pancakes on his plate. But presently the other young people got up to go. Brewster came around to Speed's chair and leaned down cordially. "Say, Kane, if you happen to find somebody who'll lend you a dollar, don't forget to join us."

Big advertising man from Cincinnati! Speed sat on the hotel porch that morning, brooding over his troubles. He thought of wiring somebody for money. But there wasn't a chance. His mother had no money to spare; and Herb Rowe wouldn't lend a tuppence to the King of England. He finally concluded that the only sensible of England. He finally concluded that the only sensible thing for him to do was to give it up and go home. No use taking this sort of punishment when a fellow wasn't compelled to. But no, he wouldn't be cheated out of his vacation so easily as that. Then the thought occurred to him that perhaps he could cancel his last week and have some spending money for a few days. He thought of the beady-eyed, pudgy little hotel manager with his smooth professional smile, and wondered about that refund. "I may decide to go at the end of the week," Speed said to him as casually as he could. "I suppose I can get my money back for the second week, all right."

The manager's face settled quickly back to its normal hard-boiled glint. "You could hardly expect me to do that, after holding your reservation the way I did, could

hard-boiled glint. "You could hardly expect me to do that, after holding your reservation the way I did, could you? Business isn't so good this summer. Now, if I had my usual number of guests—"

But Speed didn't wait to hear any more. He was back in his chair on the porch, alone with his problem. He no longer saw even the beautiful lake with its gently sloping bank covered with a profusion of wild flowers.

SUDDENLY he squared back his shoulders and took

hold of himself. This would never do. A fel-

Half an hour later Speed was standing at the writing shelf in the local telegraph office. As he wrote, his face glowed with the light

walking into the hotel manager's office. There was an optimistic man, facing into the wind with full sail. A live-wire salesman after an order. Speed could hear his sharp, enthusiastic voice.

Better take two dozen cases this week. Cherry-Pep

is making new records. People want more when they taste it. It's going over with a bang!"

Welcome words! They took Speed back to the Hannibal office. Here was the spirit of advertising. Speed was inspired merely by listening to this hustling gogetter. Confidence and energy were fine things. Why shouldn't he use as much of each one of them as he could? Why hadn't he thought of advertising before? The hotel manager had said that business was bad.

The hotel manager had said that business was bad. Speed could hardly wait until the salesman had gone. He was back in the manager's office again—leaning down over the littered desk. 'You said awhile ago that you didn't have enough guests. Why don't you advertise for them? I'm an advertising man, and I can help you.' But his order wasn't so easy as that of the energetic Cherry-Pep salesman. Perhaps the manager had concluded Speed was a deadbeat. But the answer was final and wholly unsatisfactory. 'No, we aren't interested. We send out a folder early in the season. Doesn't pay us to do any more than that.' us to do any more than that.'

But even so, Speed hadn't quite lost his inspiration as he found himself again on the lonely porch. It seemed to him that, somehow, Cherry-Pep pointed to a solution of his difficulty, though he couldn't for the life of him

of his difficulty, though he couldn't for the file of films see just where.

"I reckon if I keep wide-awake," he mused, "I'll get a hunch when the right time comes." And he forthwith certified this conclusion by going to the soda fountain and buying a glass of Cherry-Pep. It did taste good. Yes, he'd want some more of that.

"I bet Steve Roberts could write some snappy copy about this stuff," he said, as he walked out to the poch again. "I bet it's a good account. They must be real advertisers."

advertisers.

advertisers."

But another day passed, and Speed was still without funds—that is, except his four dollars and fifty-one cents, representing his original scant fund, less the price of one glass of Cherry-Pep. And supper was a dreary meal. The other young folks now ignored him entirely. Connie didn't even nod to him when she came in. They talked over his head, just as if he we're not there discussing their gay times and ship lease for

there, discussing their gay times, and their plans for

the morrow.

Speed went back to his room early that evening, heartsick and depressed. The Cherry-Pep salesman was a bright memory still, but it was failing him. "Sitting around here like a boob," he muttered through clenched teeth. "I'm a sap, that's what." He reached into his pocket and took out what change he had. He counted it over twice. Then he got up from the edge of the bed where he had slumped. I'm going to get what fun it will buy, I don't care what happens after that." he said. And he started roward happens after that," he said. And he started toward the dance hall.

That evening he spent a dollar, and thereby went to the hall with Connie and the other girls. It was a great evening, and he became one of the gang

again. He danced franti-cally, if such a term can be applied to the art of making the feet keep time to music, for he dared not stop and consider his foolexpenditure of money He was violating his well-known principle of not starting to spend when you do not have the money to see you through. But he had made up his mind. When he finally went to

bed, he was in better spirits. There would be some way out—if he kept his eyes open. He never had failed before. And he wouldn't now. Cherry-Pep! He'd

had a bully evening.

Another day found him with a further decrease of two dollars. He now had one dollar and fifty-one cents. He was sinking fast,

cents. He was sinking fast, but the water felt fine. Lots of fun, of course. But Speed had been doing a heap of desperate thinking. He had thought of everything—saving somebody's life in the lake, finding a runaway child, catching a bandit, and other melodramatic foolishness. But there were no opportunities. People didn't start to drown at the right time. There were no children up here to run away. And the bandits probably all were spending the summer in Chicago. Meanwhile, he was at [CONTINUED ON PAGE 456]



FACT and COMMENT LOW X

Flying Back

A SCHOOL baseball game was being played last month. Across the fields appeared an airplane, flying low for a landing. It struck a concealed ditch and nosed over with a crash of breaking wood. The pilot unfastened his stery belt, crawled out and helped his breaking wood. The pilot untastened his safety belt, crawled out and helped his passenger to safety. Spectators helped to turn the plane right side up again.

"Only the propeller is broken," said the pilot. "I'll telephone to Boston for a new one, and we'll fly right back again."

But a group of startled byssanders had

But a group of startled bystanders had gathered round the passenger, making remarks of this kind:

"What a terrible experience, Tom!"
"We thought you would surely be killed!"

"Of course, you won't trust yourself in the air again. Be sensible, and go back to

Boston by train!"

A little later, Tom stood with the only man in the crowd who had long experience with airplanes

That wasn't a bad crash, but it looked had to the crowd," said the man. "The interesting thing about it will be its effect on you. If this were any Army aviation field, we'd send you right up again for your own future peace of mind. Are you going to fly back to Boston?"

"I don't want to "said Tom frankly."

"I don't want to," said Tom, frankly.
"But won't I look yellow to the crowd, if I don't?

"Forget the crowd," answered his end. "If you want to feel comfortable airplanes, follow Lindbergh's example and go right up again. You will have a nice trip back, and land on a hard, safe field, and you will convince yourself that this little crash wasn't the fault of plane or pilot, but merely an accident due to landing in a hidden ditch. How about

"I'll fly back," said Tom.

BY making this decision, Tom saved himself from much worry and fear in the future. The reference to Lindbergh is interesting. You remember that the world's greatest pilot had a bad crack-up in Mexico a few months ago, while flying with Miss Morrow. It was not his fault. One of the wheels had fallen off in the air. The next morning, with his arm bandaged, he drove to the field and took Miss Morrow up for another flight.

Veteran pilots smiled when they read that story. It was the old Army plan of proving to yourself and your passenger that accidents are the exception, and not that story.

Even with a pilot as peerless as Lind-bergh at the controls accidents will occur from time to time. Risks are growing less, but they will always remain in the air, just as they remain on the railroads, on the sea, on the roads. If we mean to leave our homes and move around the world at all, we must face some risks. Is there any sure way to overcome our natural fears?

Theodore Roosevelt's example is an excellent one

He was a thin, nervous small boy. His eyesight was bad. But he learned to ride jumpy horses on a Western ranch. He behaved gallantly on the battlefield. In middle age he took an early morning flight in a primitive airplane because he was unwilling to have his sons face dangers that were too strong for their father. Near the end of his life he explored the fever-ridden jungles of Brazil

He was a brave man. But bravery was not instinctive in him, any more than it is in the rest of us. How did he make himself

"I try," he once said to a friend, "to master each small fear before it can turn into a big one that can master me. If a certain fence scares me, when I am riding a horse, I first make sure that my horse can clear it. If necessary, I school him over a lower jump. But I always give myself the discipline of going over the high one. After I have cleared it once, it never can scare me again."

SUCH a method of overcoming fear is A boy who is afraid of diving off the high platform into the water can start with a lower rung of the ladder. Learn how to enter the water at an angle that does not hurt you. But don't be satisfied with the low dive. When you have mastered your

fear of that, go straight to the high one.

After you have done it once, it never can

After you have done it once, it increases scare you again!
Perhaps you are afraid of the dark, of loneliness, of the woods at night. Shake-speare knew that fear. "Or in the night, imagining some fear," he wrote, "how easy is a bush supposed a bear!" But if we make short trips at first, noticing that the bushes are bushes, not bears, we will eventually become as fearless as David Crockett or as Colonel Roosevelt himself.

Bravery is not instinctive. But all perils Bravery is not instinctive. But all perils look smaller when we face them squarely. There is a fine story about a little Frenchman, Georges Parfrement, who was engaged to ride in the Grand National Steeplechase in England, over the most dangerous jumps in the world.

He was taken to inspect the course on the afternoon before the race, and byspanders.

afternoon before the race, and bystanders pointed out the high fences to him, in the hope of shaking his nerve

Those jumps will look lower," said orges, "as soon as I'm up on my horse."

Foolhardiness is the reverse of true courage. Only a fool can be foolhardy. Roosevelt never in his life did any showy "stunt" to prove his courage to a mob of spectators. A boy or girl who shows off in this way is as tiresome and unpopular as a small child who walks too close to the edge of a cliff, or who climbs on the roof

of the house calling out, "Look at me!"

And foolhardiness sooner or later reaps its reward. Especially in the summer time the newspapers are full of the fate of fools the newspapers are full of the fate of fools. Somebody tries to beat the train to a rail-road crossing, and fails. Somebody hires a canoe, and tips it over in deep water, before he has learned to swim. Somebody fools with a pistol, and kills his best friend. Somebody goes flying with a "tramp" aviator, and the rattletrap old plane catches fire in the air.

There is no true courage in doing things

There is no true courage in doing things like that. It is sometimes difficult to tell the difference between a hero and a fool. But here is one way. I ook at their mouths. The fool's mouth is always open, bragging about his deeds. The brave man's mouth (look at any picture of Lindbergh) is shut

in a thin, firm line.

Every hero has had fears, like the rest of us. But he has mastered them, one by

Make a mental list, some day soon, of the things that frighten you. Do not think yourself unfortunate. Everybody starts yourself unfortunate. Everyoody starts life with an instinctive dread of the dark, of deep water, of high places, of very rapid motion, and of many other things. But wise men master their fears, one by one.

It is not shameful to be afraid, but it is shameful to do nothing about it. Begin with small triumphs over your fears, and the large triumphs will follow soon. Your life will grow happier every day that you conquer some nagging fear.

Being a Snob

A CERTAIN college professor recently got himself at odds with his dictionary by advising the graduating class which he was addressing to be "snobs." This advice, coming in place of the particular these are many applications. of the platitudes that are more usually called forth by commencement weeks, brought the professor—he was Robert E. Rogers of the English Department of Massachusetts Institute of Technology a deluge of newspaper publicity and a good deal of unfavorable comment from people who did not understand him.

Of course, speaking by the book, Professor Rogers misused a word. He did it, presumably, to make his audience sit up and listen—always a pardonable device for a public speaker. The unabridictionary says that a snob is one The unabridged admires superior things or persons in a mean and unworthy way. He is a boot-licker, a truckler to persons of rank and power. He is one who despises merit if it be modest.

Now of course Professor Rogers did not want any student of his to be that kind of person. After he threw his bombshell he went on to tell his hearers to make the most of themselves; to associate' with intelligent, cultured and influential people; to wear good clothes and speak good English; to realize that their talents and their education entitled them to be leaders, not followers; to have dignity and a proper self-confidence; to aim for the highest places and to level neither their standards nor their conduct down to that of the mass of the people.

sidered in this way, there was much good in Professor Rogers's advice. He was urging his hearers to set a high example instead of following a low one. Not long ago another college teacher said that ten years after graduation it was impossible to tell a college man from one who had never had any college training. There are power-ful influences here in the United States to bring the whole population to a single standardized, monotonous level. The man who has advantages of education is too much afraid of being called a "high-

That is why it is good advice for young That is why it is good advice for young people in college or out to try for the best things instead of being satisfied with second or third best. It is good advice to tell them to speak good English instead of slovenly English, to dress neatly and well instead of carelessly and shabbily, to associate with people who can improve them instead of with those who cheapen them to use their gifts and their education. them, to use their gifts and their education, if they have them in more than common measure, to become leaders of the people instead of being ashamed of them. Don't be a snob in the meaning of the dictionary. But do make the most and the best of yourselves. Don't slip down to a low level in taste and thought and conduct when you have it in you to amount to something worth while.

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War and Peace

As this editorial is being written, the newspapers are full of stories about Mr. MacDonald, the new Premier of Great Britain, and his projected visit to the United States for the purpose of meeting President Hoover face to face, and discovery plans for settling in condial. discussing plans for settling in cordial friendship any lingering differences between the two countries, about the size of their navies, the war debts that still remain unpaid, and other similar matters. Less conspicuous are the reports telling about

the final meeting of a great conference at Paris to arrange definitely about the amount Germany is to pay in reparations to the countries it invaded during the war.
At the end of that conference the French and German representatives, coming from nations long hostile, and only a few years ago engaged in a terrible war, shook hands with smiles and congratulated each other on the successful outcome of the negotiations.

It may be too optimistic to say that

there will never be another war. Doubt-less there will be. Human nature has its quarrelsome side, and when it is sufficiently irritated it is likely to seize the nearest weapon and make use of it. But human beings can learn as well as they can grow angry. They have had some very hard experience in war-making, and they will hesitate more than their fathers did about plunging into battle again. Twenty years ago it would have been impossible to make a peace-at-any-price man like MacDonald Premier of Great Britain. Herr Stresemann is the kind of cool-headed, friendly sort of man who could never have led the German nation before the war. The French are no longer dreading or expecting We have a Quaker President who will use all his great gifts in the cause of peace. War is going out of fashion. The world grows wiser and more selfcontrolled very slowly and graduallybut surely, nevertheless.

......

"Betting Your Shirt"

WOULD bet my shirt" is a phrase that most of you must have heard now and then. It is the expression of supreme confidence. The significance of it is that the speaker is so sure that such and such a thing will come to pass, or that so and so will beat somebody else in a race or a match, that he is willing to wager on the result not only everything he has of value

but the very clothes on his back.

The words have usually the most figura tive of meanings. Did you ever see anyone actually take off his shirt and put it up at wager? But lately the thing has really begun to happen. College oarsmen have taken to "betting their shirts" on their own superiority to their rivals. At the end of a race it is common enough to see the defeated crew stripping off their armless rowing shirts and handing them over to the victors. There are said to be one hundred and eighty such shirts, tro-phies of a succession of triumphs on the water, in the boathouse of one of the

Eastern universities. Now, "betting your shirt" as the college crew men do it has some good points. In the first place, these boys are wagering something of no monetary value. For nothing is worth much less, from a money point of view, than an old rowing shirt after the season is over. The shirt is a symbol; nothing more. It stands for a symbol; nothing more. It stands for a splendid physical effort, nobly made. The man that wore the shirt that hangs in the trophy room probably "rowed his heart out" in the race where it was lost. He gave everything he had; and when he and his fellows met a crew that, in spite of all they could do, was just a little stronger and cleverer with the oars they cheerfully yielded up their shirts as a sign that they fought a fair fight and lost to an eight of fought a fair hight and lost to an eight of better men. They are a little like the knights of old, who yielded up their armor to those who had vanquished them in the tournament. The old rowing shirt, un-promising as it appears, becomes in this way a symbol of chivalry quite as signifi-cant as the armor of Sir Bedivere or Sir ADVISORY COUNCIL: E. K. Hall, Chairman Football Rules Committee; Julian W. Curtiss, rowing authority and referee; Dr. James E. Naismith, inventor of basketball; Waston Washbarn, former Davis Cup tennis player; Robert C. Zapphe, football coach, University of Illinois; John T. Doyle, American Sports Publishing Co.

swimming teams at Northwestern Uni-versity have won the Big Ten Conference Chambiographic

EDITED, UNDER THE DIRECTION OF THE YOUTH'S COMPANION'S SPORT ADVISORY COUNCIL,

By Sol Metzger

PLAYING THE NET 15N'T ALWAYS A SMASHING GAME - JEAN -JEAN BOROTRA DOES IT WITH FINESSE

Playing at the Net

5-1 THE MAIN

Playing at the Net

Tennis players do not always come to the net
for a kill. It is impossible to smash the ball
so that all returns are not high lobs. Opponents
often attempt to get the ball past the net player.
One of the hardest strokes to play at the net
is a ball that just gets over the net and forces
the player coming up or already there to reach
for it and pick it up.

One reason why the French have been supreme
in world tennis these past few years is their
mastery of net play. They can smash lobs for
clean passes and volley to perfection. But they
have another shot of commanding importance.
They are able to handle returns from the deep
court which are purposely played far to the net
player's side and which just drop over the net.
Jubilant Jean Borotra, one of the Three Musketeers of French tennis, is a master of this stroke.
Note how he stands at the net with his racket
balanced with his left hand. Note his wide sidestep to handle such a return and the wrist action

step to handle such a return and the wrist action he uses to get the ball just over with an exaggerated cut. Few opponents can return such a shot.

—S. M.

Sport Book Review

MODERN ATHLETICS. By G. M. Butler. 152
pp. (The MacMillan Company.)
The object of the book, to provide school-boys
with the main principles of training and competition for certain specific track and field events,
has been accomplished by this well-known British track star. Form is not only explained by
text but clarified by numerous fine movie photographs.

text but clarified by numerous fine movie photographs.

FIRLD BOOK OF MARINE FIRMES OF THE ATLANTIC COAST. By Charles M. Breder, Jr. 332 pp. (G. P. Pustum's Sons.)

A pocket-sized book that gives the habits, range and prominent features of our coast and river fishes from Labrador to Texas. Splendidly illustrated by photographs and drawings. A handy book for an angler.

PLAY DAYS FOR GIRLS AND WOMEN, By Margaret M. Duncan. 87 pp. (A. S. Burnes & Go.)

A well done book that should be in every girls' school and camp in the country for the purpose of teaching girls how to play among themselves and with the students of similar schools.

SPORT

Don't Wait to be Pushed Off the Dock

Proper training makes it easy for anyone to learn to swim

EDITOR'S NOTE:
Ton Robinson bas been coaching swimming and its allied sports for twenty-three years, and is today one of the greatest coaches in the country. Since 1914 bis swimming teams at

of various positions in the water—with a foot or hand on the

Big Ten Conference Championship n in a times and the National Championship four times, while his water-baskethall and water-pole times, while his water to be compositely. During the past college year his team broke every national collegiate record for the short course except in the 200-yard breast stroke. They set three world records, three Conference records, seven Pacific Coast records, four Recky Mountain records and five Missouri Valley records. Advice from se great an authority on the sport will be welcomed by every swimmer, whether expert or novice. a foot or hand on the bottom, or supported by a floating board, water-wings, or a life-preserver. That will impress on him that when he lowers his head his SWIMMING is exercise, and good exercise, bringing into play muscles that other sports leave untouched, but there are other reasons why it should be familiar to everyone. As a recreation, a sport, a means of saving life—others

when he lowers his head his feet will rise, and vice versa.

It will also help to teach him a highly important point—that every muscle not actively engaged in producing motion must be completely relaxed.

Next he should practice correct breathing—in through the mouth, quickly, and out through the nose, slowly, until it becomes almost automatic. If this is done with the face alternately in and out of with the face alternately in and out of water, and with the body in various positions, but allways relaxed, the first and most important lesson in swimming has already been learned.



as well as your own—it is an art that everyone can—and should—master.

Working before a mirror is one of the best ways to develop form and precision in your swimming strokes. It needs no pool, and can be done at home

Whether you live in the city or the country makes no difference. Every city now has swimming pools and instructors that amply make up for the lack of ponds and streams. As a matter of fact, the speediest awimmers are usually the product of large cities.

Learning to keep from sinking is fairly simple, and to do it does not require the ability to swim. The average human being no more has to keep in motion to prevent sinking than does a boat. There are exceptions—big-boned and heavy-muscled men and boys—but about 45 per cent. of all men and boys—but about 45 per cent. of all men and boys and 90 per cent. of women and girls are able to float.

An object in water sinks until it displaces water equal its own weight. If you are trying to float, and have your arms above your head, your body will sink farther than if your arms were extended sideways. The normal individual with lungs filled with air who is motionless in

By Tom Robinson

Swimming Coach, Northwestern University

the water will naturally float with most of his body submerged, but with a part above water. The secret of floating successfully lies in so balancing the body that the face will be that unsubmerged part.

unsubmerged part.
Floating is important; so important that the actual strokes are the last things a beginner in swimming should learn. The beginner who strikes out for a short distance and then begins to sink is merely losing his balance and getting out of breath. He should stop trying to move through the water and learn to rest in it.

To begin with, he should first experiment with the effect of various positions

Practicing the front crawl

The Swimming Strokes

A good swimmer can travel fifty yards in less than half as many seconds, but

in less than half as many seconds, but most of us require two or three minutes for the same distance. Yet the good swimmer will probably have expended the least energy of all at the finish.

The secret of good swimming, whether for speed or distance or simply pleasure, lies in getting full results from every ounce of energy expended. This comes not only from the control of the muscles actually used for propulsion but from the relaxation of all the muscles which are not being used.

In this brief article I want to help not only those who do not know how to swim but also those who want to improve their style and speed, and these directions for the various strokes are written with that double end in view.

strokes are written with that double end in view.

A good way to begin is to practice the arm stroke for the crawl in front of a mirror until you have some idea of what the arm action is you have some idea or what the arm action is like. Then lie down on a bench and practice the kick for both front and back crawls, as in the illustration above. To learn the proper method of breathing, fill up the washbowl, then take a good breath through the mouth, with the face near the water. If this is done each day for a week before your first lesson, half the battle is

over.

The first time you enter the pool or open water simply wade in waist-deep, practicing your arm stroke in a bent-over position. Then grip the side of the pool or the pier, or go into the water where you can reach the bottom with your hands, and practice both breathing and the kick.

When you are ready to try to combine arms, legs and breathing, put on a pair of water-wings just above the waist, and make your first attempt. Take things as easily as possible, keeping the body straight and flat near the surface of the water. To hurry or try to go fast will only spoil your progress.

The American Trudgen Crawl

When fully extended on the water, arms out in front, legs straight and toes back, the body looks very much like a canoe. Try to imagine, if you can, that your legs are the propeller and that in each arm you have an excellent paddle.

Well-balanced

power comes from six leg beats for

two arm actions.

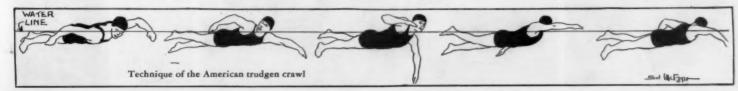
The leg actions are from the surface to a point not lower than the lowest part of the abdomen.

front crawl
front on which he wishes to breath in. The following directions are for the swimmer who breathes by turning his face up on the right side. As the right hand sweeps back under the body there is a slight roll over to the left side; this roll turns the face up to the surface, and as the mouth clears the surface the upper side of the mouth is opened, and a quick deep breath is taken. By this time the right arm has finished the backward action and a slight roll of the shoulders turns the hand palm down, so that the arm may be carried forward relaxed. A slight bend occurs at the elbow as the arm is carried forward, which also helps to relax the arm.

As the hand passes opposite the head it is four to six inches above the water and about a foot from the head. As it passes the head the hand is carried in and forward until it catches, or strikes water, directly in front of the shoulder. As the catch on the water is made, the hand is driven forward, down and back, in a direct line under the body. From the time the swimmer inhales on this arm stroke he must continue to exhale through the nose slowly until his hand again approaches the right point for the next new breath. The left-arm action is performed exactly as explained for the right, except that [CONTINUED ON PAGE 462]



This is the way a beginner should start learning



THE MARCH OF SCIENCE



Corn Stalk Lumber A New Use for Farm Waste

CORN stalks, shavings and sawdust, formerly thrown away or burned as waste, are now converted to lumber by a new process which, if successful, will mean a saving of many thousands of dollars a year for farmers. In the picture below the prepared fibrous material has been placed in a form, ready to be subjected to pressure in a large hydraulic press. The finished product is said to be as strong as genuine timber. (Photo by Underwood & Underwood)



Floodlights for Firefighters \$\sqrt{}\$ A Searchlight Truck for San Francisco

THE truck below, equipped with searchlights and generator, is known as "Searchlight Plant No. 1" of the San Francisco Fire Department. Its equipment includes five 1,000-watt lights and eight 500-watt portable lights with stands. It was designed by Sam Birmingham, superintendent of the Corporation Yard of the San Francisco Board of Public Works, and is said to be the only one of its kind in the United to be the only one of its kind in the United States. (Photo by Wide World)



A New Giant of the Seas

In a shipyard at Belfast, Ireland, work is rapidly going forward on the 27,000-ton motor-ship, Britannic. Unlike most ships of that size, she will be driven not by steam but by oil, burned in huge Diesel engines. The size of these engines may be judged from the crankshaft at the left, which you see in the huge lathe in which it is being turned. The Britannic herself is seen above with work proceeding on her super-structure. Just at the left of the funnels is the base of the largest floating crane in the world. Diesel engines, operating on much the same principle as an ordinary automobile engine, but using a heavy oil for fuel instead of gasoline, are becoming more and more common in passenger and freight ships. (Photos by International)



Fire Sirens in Japan This One Is Used to Signal Time

ON top of a tall building in Tokyo, Japan, the gigantic fire siren which you see in the picture above has been erected to signal the hours of the day to the Japanese capital. It replaces the firing of a cannon at a near-by army post. (Photo by Underwood & Underwood)

These Switches Control 220,000 Volts Though Huge in Size, They Are Portable

Though Huge in Size, They Are P. The man turning the valve in the lower left-hand corner of the picture at the right will give you some idea of the enormous size of the giant portable oil switches which have been built by the Siemans-Schuckert factory, in Germany, for use on a long-distance high-tension line. This line will carry 220,000 volts, a force which ordinary switches would be wholly unable to handle. Oil switches, in which the space between the points of contact is filled with oil as soon as the switch has been opened, were developed many years ago, when it became apparent that high voltages could not be controlled with ordinary switches without the formation of a dangerous arc. These German oil switches are reputed to be the largest ever built. (Photo by Underwood & Underwood)



Submarine Safety in Italy A Device to Shoot Out Trapped Men

FOLLOWING the S-4 disaster, interest in submarine safety received a great impetus all over the world. In Europe as well as in America, inventors began to turn their attention toward perfecting devices which would enable the crew of a sunken submarine to make a safe escape. In the picture above a group of Italian sailors are standing on the deck of a submarine with part of the equipment used with the new Belloni escape tube. In the small picture a diver is

picture a diver is shown in the exit of the tube. In making a test in the Gulf of Spezia, the compartment containing the escape tube was



was used to force the diver out of the tube, whence he reached the surface in safety. If further tests show that the escape tube is practicable under all conditions, all the submarines in the Italian fleet will probably be equipped with them. (Photos by Underwood) Tuderwood



Thirty Billion Gallons For Part of New York's Water Supply

THE gigantic Croton Dam, at Croton, N. Y., is only one of New York's sources of water, in spite of its immense capacity of 30,000,000,000 gallons. The height of the dam can be estimated from the

depth of the valley which stretches into the distance. From all its reservoirs New York draws nearly a billion gal-lons a day, all of which must be puri-fied. In the picture at the right is part of the apparatus which accomplishes this: (Photos by Underwood & Underwood)





Locomotive Designers Adopt the Streamline

Ninety Miles an Hour with Full Load Is the Record of This New Engine





The Picture of a Sound Wave Electricity Helped to Take It SPARK photography, a development which makes it possible to use an exposure of one-millionth of a second, was used to make the remarkable picture above. It shows the muzzle of a rifle, at the right, and the bullet, which has just been discharged, a few inches away from it. The dark oval line is the sound-wave caused by the production. The rickness was made at the physical content of the production.





IF YOU ARE A JUNIOR SCIENTIST OR ENGINEER TURN NOW TO THE Y. C. LAB ON PAGE 460

THE NEWS OF THE AIR

Two World Altitude Records Fall Lieutenant Soucek Sets Two New Altitude Marks

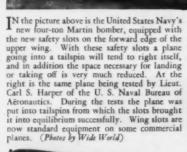
O^N May 8, Lieut. Apollo Soucek, naval engine expert, flying a Wright Apache plane equip-



ped with a Wasp motor and Roots supercharger, set a new official altitude record for airplanes of 39,140 feet— nearly eight miles. Like other aviation records, it stood for

only a short time, for on May 26, Willi Neunhofer, Junkers pilot, for on May 26, Willi Neunhofer, Junkers pilot, reached an official height of 42,123 feet, at Breslau, Germany. On June 4, Lieutenant Soucek, using the same Wright plane with which he had using the same Wright plane with which he had made his previous altitude record, but equipped this time with pontoons instead of wheels, set a new world's record for seaplanes. At the naval air station at Washington, D. C., he reached a height of 38,555 feet. Before these new records were set the altitude record for both seaplanes and airplanes was held by Lieut. C. C. Champion, U. S. N. Lieutenant Champion on July 25, 1927, flying the same type of plane as Lieutenant Soucek, reached a height of 38,418 feet. Lieutenant Soucek you see above, and at the left his record-breaking plane. (Photos by Wide World)











A Strange Addition to Experiments in Flight A New Airplane Is Completed to Fly Without Propellers

ON this page in the March, 1929, issue of The Companion, a picture of Paul Maiwurn's strange new aircraft was printed, showing the framework in course of construction. Now the complicated range of struct the complicated tangle of struts and braces has been covered with fabric and the machine is being groomed for its first flight. Its notive force will not be pro-ellers, but a series of helical ns attached to the barrel-like



structure below the upper wing. This barrel will be revolved by an 80-horse-power motor at 300 revolutions per minute, and the resulting cyclonic whirl is expected to prove powerful enough to lift the machine from the ground. The pilot sits in the lower part of the fuselage, near the wheel. The small picture at the left shows the plane before it was covered. (Photos by Underwood & Underwood)



For Long-Distance Flying Its Cruising Radius Is 6,000 Miles

THE new all-metal plane above was built for Charles A. Levine, who flew the Atlantic with Clarence Chamberlin in 1927, by Columbia Air Liners, Inc. It embodies many new developments in design, and a cruising radius of more than 6,000 miles is claimed for it. (Photo by Wide World)



Another Safety Plane-This One Can Drop Its Motor in Midair

A Plane That Becomes a Glider in Case of Accident



A NEW addition to the long list of inventions designed to add to the aviator's safety has been made in San Francisco by Joaquin Abreu. His plane, designed partially along the lines of a glider and partially along those of an airplane, is so constructed that the engine and gas tanks can be released



by the pilot in midair. Re-lieved of this weight, the wings and fuselage can glide to earth unharmed. In the picture below the Abreu plane is shown with the motor in place, ready for flight. The small insert shows the separation between the plane and the motor. (Photos by Wide World)



THE scale model above is of a transaclantic plane, made to the designs of George Fernac, whose completed craft will have a wing-spread of 60 feet and will be powered with two Wright Whirlwind motors. Its most unusual feature is a supplementary wing forward of the propellers, designed to prevent stalling. (Photo by Wide World)

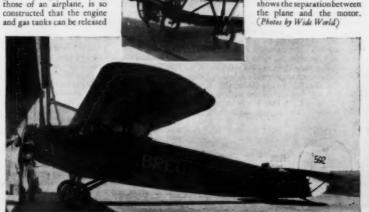
Testing Dirigible Girders 1 To Insure the Safety of Navy Airships

THE Emery testing machine in the U. S. Bureau of Standards is being used below to test one of the girders for the new Navy 6,500,000-cubic-foot airships which are being built by the Goodyear Zeppelin Corporation. The machine used has a capacity of 2,300,000 pounds in compression. (Photo by Wide World)



Learning to Fly in Fog A Training Device Makes It Easier

FLYING in fog, when all landmarks are obliterated, and the pilot must depend entirely on his instruments for maintaining not only his course but his equilibrium in the air, is one of the most difficult problems of aviation. At Bolling Field, Washington, D. C., Army fliers have devised the apparatus which Lieut. F. S. Stranathan, U. S. Air Service, is demonstrating in the picture above. The plane is equipped with dual control, and the pilot operates the craft solely by his instruments, while his cockpit is covered with a canvas top. Another pilot pit is covered with a canvas top. Another pilot in the rear cockpit remains on watch while the tests are being made, to prevent a possible crash or collision with other planes. (Photo by Wide World)



IF YOU ARE A JUNIOR SCIENTIST OR ENGINEER TURN NOW TO THE Y. C. LAB ON PAGE 460

MISCELLANY TO LONG

TO DOX

In the Sky This Month



A drawing of Saturn and its rings by Trouvelot. The divisions of the rings, described in the article below, are clearly shown

Saturn and Its Rings

By D. H. and J. F. Chappell Lick Observatory, University of California

0 1932

To say that there is noth-ing else like it in the world marks any object with great value and in-terest, but of Saturn and its rings we can say still more—that there is nothing else like it anywhere in all our sky, nothing else like it in our solar system, and, as

far as we can see, in our whole universe. We may guess that a duplicate exists in our universe or in the universes beyond, but we have no proof.

Saturn is a dark body like our earth, lighted

saturn is a dark body like our earth, fighted and warmed by our star, the sun, around which it turns. It was the most remote planet the ancients knew, and remained so until 1781, when Herschel found Uranus. The odd thing about Saturn was not seen until 1510. In July of that year, Galileo, 1921 1510. In July of that year, Galileo, the first man who ever used a telescope, saw two bright appendages on the sides of the planet—a sort of triple star, he thought; and he was much astonished to lose the wings and then see them reappear several years later. Huygens in 1655 correctly described them as strange rings. Ever since then men have been studying them. Much has been learned about them. They are not a solid boulevard, as they appear, but loose dust and particles of rock so suspended by the forces of the closely adjacent planet that they cannot be drawn together into a moon. These rings are within a distance from Saturn known as Roche's limit. They are the only matter known to be revolving about a planet within that limit. Roche Ever since then men have a planet within that limit. Roche has shown that any satellite within that distance would be shattered torn to bits by the excessive attractions. Safely out beyond that limit revolve the nine real moons of

The rings show certain separate divisions, and Kirkwood has shown that these separations (be-Kirkwood has shown that these separations (being, as they are, at commensurate distances) are due to the extra pull of the satellites on the rings at those favorable distances. The farthest edge of the rings is called Ring A, partially transparent, and of a golden shade. Then comes Cassini's division, a dark empty band about 3,000 miles wide. Then comes the middle ring B, more silvery and quite opaque, and finally the inner ring C, or crape ring, feebly luminous and semitransparent. The whole diameter out to the edge of the A ring is 171,000 miles (Lowell's measure).

position of Saturn and the earth changes, and when just edgewise to us are invisible for a day or two even through the largest telescope now in the world. When about to disappear, the rings are like a needle of light each side of Saturn. The

All during this month in the early evening Saturn may be seen fairly low in the southern sky. It is projected among the stars of the constellation Sagittarius and remains slowly crossing it for a period of about three years. So, just as in last August and in this month, in the next midsummer also we can see it again in nearly this same position. During all that time it will have many more "days" than we, for it revolves once every ten hours and

discovered the eighth moon in 1848. And the ninth, little Phœbe, which travels backward, and is far out beyond all the others, W. H. Pickering found on a photograph in 1898. This little one is perhaps only 150 miles in diameter and circles Saturn some eight million miles away. Mimas is nearest to the great rings; then comes Enceladus, then Tethys and Dione, then bright Rhea, and still brighter Titan, with the faint Hyperion beyond. A long empty stretch then before Japetus, and the last, distant little Phœbe.

The rings are not solid, but are a swarm of separate particles, each little particle or meteorite moving about the planet in its own orbit.

These rings cast a shadow on Saturn, and Saturn's shadow shows plainly also on the rings. They tip to broad and narrow view as the relative he earth changes, and

changing phases of the rings cause a seventy per cent gain and loss of brightness in Saturn's appearance to All during this month in the early

many more "days" than we, for it revolves once every ten hours and fourteen minutes. This rapid turning has made it very oblate—flattened at the poles. It is the least dense of all the planets—only about seven-tenths as dense as water. It is much larger, even without its rings and many moons, than our earth. If you think of the earth as the size of a golf ball, Saturn's comparative size would be a football at least. The nearest it comes to us is 745,000,000 miles.

Saturn's moons were not known until 1655. Then Huygensdiscovered

Saturn's moons were not known unto diswhen in hill 1655. Then Huygensdiscovered the largest of them, which he named Titan. Cassini detected four more of them by the year 1700, and in 1789 Herschel found two more. Bond and Lassell independently discovered the eighth moon in 1848. And the

The Mayflower-Slaver

The Companion's Religious Article

THE Mayflower has become one of the most famous ships that ever sailed the ocean. A vessel of only a hundred and eighty tons burden, nevertheless, when two centuries ago she burden, nevertheless, when two centuries ago she glided into Provincetown Harbor and a month later into Plymouth Bay, she brought a cargo of moral purpose and religious fervor destined to be of abiding profit to the entire world. It is not so generally known, however, that the later history of the Mayllower was as discreditable as her earlier history was noble. After her epoch-making voyage had been completed she ultimately came into the possession

pleted she ultimately came into the possession of slave merchants and became a slaver. Whereas once she brought to our shores white men hun-gry for freedom, so later she transported black men from Africa to toil in unwilling bondage. Her end was tragically appropriate, for she was

sunk by the Spanish.

The brutalities that may have been perpetrated between those decks made illustrious by the feer of the Pilgrim forefathers are suggested the feet of the Pilgrim forefather size suggested by the feet of the Pilgrim forefathers are suggested by the prelude to Stephen Benet's recent narrative-poem, "John Brown's Body." The master of the slave ship of those days had his own peculiar brand of piety, according to the grim satire of Mr. Benet. He portrays the captain of the slaver as patting his Bible affectionately and reminding his somewhat more scrupulous mate, "I get my sailing orders from the Lord." Needless to point out, the slave merchant's religion was a very different sort from that of Bradford and Carver and Winslow. One of the saddest and yet most necessary lessons to be learned concerning life is that every lofty thing is capable of perversion. The Mayflower that carried heroes could also be used to carry human chattels. So the mind, competent on the one hand to frame shining thoughts about God, may also entertain passions and jealousies begotten of dark evil. Religious faith has lifted some souls into ecstasy and serenity, but when it becomes the motive of the bigot and the partisan it has led to unjust persecution and

the partisan it has led to unjust persecution and undeserved blood. After a man has attained high powers he must not stop until he has learned to employ those powers for high ends.

More About Hair

The Companion's Medical Article

LAST month, in my first article on hair, I mentioned the two most common scalp complaints, dandruff and falling hair. These, as well as all other affections of the hair and scalp, demand the skilled attention of a physician who has made a special study of the subject, but at the same time there are certain facts about them which everyone should know.

them which everyone should know.

Dandruff is the condition commonly associated with many scales, or tiny flakes of skin, in the scalp. It is found at all ages and in women as well as men. Sometimes it is associated with a very dry scalp; at others with one which is very oily. There are, of course, many grades of scaling in all types of scalp. The treatment varies with the stage of the disease and the kind of scalp. More frequent shampooing than usual is advisable—perhaps in the dry scalp with a special soap such as a "super-fatted" soap, which is the term given to one in which there is more than enough fat to neutralize the alkali. In the oily type, tincture of green soap or tar soap can often be used advantageously. With very dry scalps, the use of olive oil may be advisable. Dandruff, if allowed to persist unchecked, will invariably result in a more or less serious loss of hair.

There are many other things which will produce falling hair. A family history of baldness is often found. Baldness cannot, of course, be inherited, but what physicians call hereditary predisposition may act in much the same way. Sickness of any great severity, particularly when accompanied by fever, may result in falling hair. Overexposure to sun, in certain types of scalp, will have the same effect. So will the daily use of water, particularly if the hair is not dried properly. And, as important as anything else, general health often has an enormous effect on the condition of the hair. Dandruff is the condition commonly associated

general health often has an enormous effect on the condition of the hair.

Much of the loss, particularly in persons who have no family history of baldness, may be pre-vented by the proper treatment and strict atten-tion to general health. Stimulating agents, lotions, salves, and so on, are usually of value, but they should be employed only in accordance with a physician's directions. The way to relief

is often a long one, but perseverance will tell in

One of the things to watch, along with cleanliness, a moderate amount of sunlight and other precautions, is the use of coal-tar dyes. Gray hair among young people sometimes occurs, and there is a strong temptation to dye it. Cerprecautions, is the use of coal-tar dyes. Gray hair among young people sometimes occurs, and there is a strong temptation to dye it. Certain scalps can stand these dyes without trouble, but, once irritation is noted, their use should be stopped at once. Otherwise the irritation, even if it has no serious result, may persist for a long time.

C. GUY LANE, M.D.

Messages in a Boat The Best Trick of the Month



THE curious drawing at the left, looking much like the plan of a boat crisscrossed by meaning-less lines, in reality hides a message which can be easily deciphered when you know the trick.

you know the trick.
Here is how it is made:
You will need a compass
and pen, ruler and a sheet
of paper. Tack your
paper down and draw a
light vertical pencil line
on it. On this line locate two points for the
compass, so that you can
draw parts of two curves

The Bool Puzzle

The Bool Puzzle

Tracked to, on the vertical line and ten inches below the lower edge of the boot. Then, holding your ruler against this pin, you can draw lightly the radiating lines which are the secret of the trick.

of the trick.

To learn this secret, turn the page so that you are looking at it sidewise, with the outer margin farthest from the eye. Hold the page about eight inches from your eye and turn it so that it is almost flat. When you have done this, the words of the message will appear plainly. If looked at any other way, the puzzle cannot be deciphered.

Any message you desire can be lettered in when you make the puzzle. For place cards or as a stunt for a party, these boat puzzles have many uses.

"Greatly Surprised" An Actor Comes to Grief

An Actor Comes to Grief

WHEN John Philip Sousa was a young man he directed for a time the orchestra that accompanied Milton Nobles' dramatic company in its tour of the country. In his book "Marching Along" he tells of an incident that happened when one of the actors had taken French leave. A little Englishman who was a valet to a member of the company volunteered to take the part, which was that of an Irish lawyer.

The play was "The Phoenix." The first act ends with a spectacular fire scene, and traps were prepared in the floor through which the flames were to ascend at the proper time. One of these traps was directly in front of the door through which the lawyer made his first entrance. Un-

traps was directly in front of the door through which the lawyer made his first entrance. Unfortunately, he had not been warned to avoid the trap as he entered. When his cue came, Mr. Nobles, the star, was sitting at a table in midstage, supposedly at work, writing the story "The Villain Still Pursued Her." At the cue, the enthusiastic valet-actor threw open the door, and with a hearty "Good morning, Carroll, I have brought you some oysters!" stepped squarely on the fire-trap, and instantly disappeared through the floor.

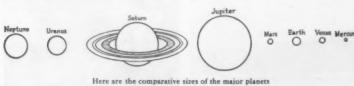
The audience thought it all part of the play and roared with laughter. But the young orchestra leader and the rest of the company were horrified. They feared that the poor fellow was killed or at least maimed, and the curtain was at once rung down.

once rung down.

"When I reached the stage," Sousa writes, "I found a ladder lowered into the pit and a group of actors and stage hands peering down into the abyss in alarm. At that moment the valet poked his head up through the trap. Mr. Nobles seized his arm.

"Are you hurt?" he cried.

The little Englishman looked at him in a perplexed way, and replied very slowly, "No, I am not hurt, but I am greatly surprised."





Plymouth Quality Sets new Records for Value at Low Price



PLYMOUTH

AMERICA'S LOWEST-PRICED FULL - SIZE CAR

PLYMOUTH quality begins with finer raw materials—where all true quality must inevitably begin.

Step by step, that basic quality is enhanced by advanced engineering, elaborate care and superior craftsmanship. It reaches its climax in a superbly finished product of *full-size* dimensions, easy-chair comfort and thrilling performance.

Plymouth has the substance, the stability, the quality and ability of a higher order than ever heretofore seemed possible in so low-priced a motor car.

Look at its rugged axles, its heavilyfortified frame, its large high-compression engine—strength and dependability in every detail. Look at its *full-size* Chrysler weatherproof internal-expanding fourwheel hydraulic brakes—a marvelous safety factor. Plymouth is the only car sold



THE FULL-SIZE PLYMOUTH TWO-DOOR SEDAN

at anywhere near its low price which is equipped with brakes of this advanced type.

Lay a rule on the extra-wide seats. Measure the spacious leg-room. Note the ample head-room. Relax on the

PLYMOUTH—product of Chrysler engineering and craftsmanship—has been so named because its endurance and strength, ruggedness and freedom from limitations so accurately typify that stalwart Pilgrim band who were the first settlers of Plymouth and among the first American Colonists.

form-fitting cushions. Close your eyes and you'll believe you're in your favorite lounge-chair.

Take the wheel. Touch the accelerator pedal. Feel that rush of power, that speedy get-away. Mark how eagerly Plymouth streaks from a crawl to sixty and more—and all so smoothly, so quietly, so eminently free from effort.

Chrysler engineering and Chrysler craftsmanship have established Plymouth as the distinctive quality car of the low-priced field—and there is no mistaking the fact had got the dinghy aboard and cleared the decks

tor sea.

As the sun lifted above the green but rugged profile of the island and shed its warmth on deck, C. J. pulled off a sweater. He then indulged in a loud, resounding yawn and remarked: "Captain, you'd better get the watch on deck. I want to speak my piece before on deck. I turning in."

turning in."
Jerry went below. Almost immediately Roger Livingston bounded out of the companionway, his blue-and-white striped pajamas flapping about his thin shanks. For once Lily-white had not stopped to brush his hair. "What's this?" he shouted, catching sight of the imperturbable figure of his guardian at the helm. "A joke? If it is, I don't think it's a bit funny." "You're shanghaied," said C. J., his smile broadening. "How do you like it?" "I won't stand for it," shouted Roger, stepping close to the helmsman. "You may be my guardian, but you can't shanghai me."

ping close to the helmsman. "You may be my guardian, but you can't shanghai me."

"I'd have said you couldn't shanghai my captain and bos'n to the beach, but you did."

"You bet I did!" cried Roger. "I'm tired of this stupid yacht, and I told you I was going to take a steamer home."

To this fiery remark there were many answers on the tip of C. J.'s tongue, but he chose one that seemed least obvious. "You won't be tired when you've learned how to do a day's work."

day's work."
"But I won't work," said Roger, his voice

"But I won't work," said Roger, his voice rising to an angry shriek.
"Then you won't eat," replied his guardian." From now on you're a member of the crew." For answer, Roger spun on his bare heel and darted below, the slamming of his stateroom door indicating his contempt for his guardian's threat.

stateroom door indicating his contempt for his guardian's threat.
"Number one," remarked C. J., placidly.
"Wonder how the other one will take it."
But it wasn't the other one who appeared next. Jerry, showing no favorites, had aroused Budge Hale, and he popped out, trousers and sweater thrown on over his pajamas. "What's up?" he asked. "It thought you didn't have a full crew?"
"Oh, good morning, Budge," declared C. J., in a tone of good-natured raillery. "We haven't, and that's why I am at the wheel. We're bound for the States, and if you watch out you can get a good story out of this."
"Sounds like a mystery story to me, Mr.

get a good story out of this."
"Sounds like a mystery story to me, Mr. Dyer. Who's the villain in the plot?"
"Roger and Ted were the villains, but they've swapped places with me. You didn't have any part in the plot to tie me up in Ponta all summer, but I'm afraid you'll have to suffer with the guilty. At least, I'm going to ask you to take a place in Captain Bigelow's watch. You'll get some realistic experience. Oh, good morning, Ted; what are you doing up so carly?" carly?

who dragged himself on deck at this moment, yawning and rubbing his eyes, was also arrayed in striped pajamas. But they were open at the throat and too short as to sleeves open at the throat and too short as to sieeves and legs, presenting anything but the natty effect of Lilywhite's night attire. He slumped into a wicker deck chair which he found conveniently placed between the companionway and the wheel, and yawned again before re-

That's what I want to know. That bird

"That's what I want to know. That bird Jerry pounded on my door and almost yanked me out of bed. When I finally came to I thought I was going to be late for the steamer. But it seems we're being our own steamer."

"Yes, Ted. When I learned that you and Roger planned to leave me I got under way. I've made Jerry captain of my ship with a captain's wages and authority. Luke, being the only other man on board that knows a bowsprit from a boom gallows, is first mate in charge of the port watch. You'll be in Jerry's watch and will take orders from him. How does that suit you?"

Again the prodigious yawn. "Doesn't suit me at all," began Ted in the middle of it. "If you don't mind, I'll tell Jerry to lower the

on t mind, I'll tell Jerry to lower the dinghy and put me ashore."

C. J. smiled as he gave the wheel a spoke. "Jerry," he called, "on deck, please."

The youthful captain, who wasn't yet feeling at ease in the playing of this strange drama, had stepped into the chart room after waking the come. Now he came up and stood close to Ted.

awaiting further orders.

"Captain," said C. J., "don't you want to make sail and stop burning gasoline? You are

in command."
"Aye, aye, sir," said the boy. "Ted, hop out of the chair and lay hold of the fore throat halyard. We'll put the foresail on her first."
Ted stretched out his long legs, settling himself more comfortably. "Sounds very nautical, m'lad," said he, "but I don't work before breakfast."
"You work when."

work when you're told," said Jerry, his

SHANGHAIED

CONTINUED FROM PAGE 426

diffidence leaving him. "And this will be the last time you're told twice. Get up and get Once again Ted yawned. "Oh, suppose you

what happened then was unlike any other contest of authority that C. J. had witnessed aboard ship. Jerry was over the seated boy in a aboard ship. Jerry was over the seated boy in a flash, wasting no time in threats. He seized the surprised Ted by the arms from behind, and despite his great weight lifted him to his feet. Then, giving his victim no time to collect his wits, Jerry propelled him at a shuffling run to the foremast. "There's your work," said the captain, panting slightly. "Go to it."

"Till be hanged first," said Ted, his temper catching up with these rapid events. "What do you take me for, a bag of meal?"

"I take you for a shanghaied sailor that's too lazy to get out of his own way. Hoist that throat halyard as I take up on the peak." And Jerry laid hold of his halyard and hauled away, hand over hand.

For a moment Ted watched him in dumb

For a moment Ted watched him in dumb



IN 1909, the year that Bleriot flew the English Channel, a young Dutchman was beginning his experiments with flight. Today the planes he has built include such famous record holders as Commander Byrd's Josephine Ford and America, the Southern Cross, the Question Mark, the Friendship and many others. His career is a thrilling story of conquest and achievement in aviation.

DON'T MISS

Fokker-Master-builder

IN SEPTEMBER

amazement. Then his hands shot up the hal-yard, and he began hoisting away. The coat of his pajamas split with the first heave, and his tongue began wagging with the second. "So you think this is the throat halyard, do you? Well— ugh—it's your throat I'm choking. I'll—ugh— show you you can't—ugh—order me around like that."

like that,"
"'Vast heaving," said Jerry. "Luke, cast off
the fore sheet, will you? All right, Ted, make
that fast, and we'll take the rest on the jig,"
There were more orders, and before Ted knew
it the foresail was set and drawing and Jerry was
walking aft to the mainmast, saying over his
shoulder, "Come along. We'll hoist this with
the power winches." the power winches.

"But, for Pete's sake, stand still a minute," cried the bewildered Ted, "and let's have this

Jerry turned and eyed his man a moment. Then he said: Then he said: "Go below, Ted, and get some-thing on. Landsmen may go half naked about a ship, but sailors don't. Here, Hale, and I'll show you how to take a turn around a

winch."
Again Ted was baffled by Jerry's calm assumption of superiority. He looked at C. J., standing like a wooden image at the wheel. If there had been even half a smile on the face of C. J., Ted might have gone wild with rage and climbed all over the offensive Jerry. But C. J., being something of a psychologist, had hastily removed his smile. He was just steering.
"But—but," stammered Ted. "You can't—"
"You still here?" exclaimed Jerry, looking up from his work with the main halyards. "Make it snappy; I'll need your beef for the headsails."

ED went. In his stateroom as he struggled into some old clothes his anger mounted. Two minutes later he was out on deck with blood in his eye, ready to fell Jerry with blow of his fist. But the captain, going co dently about his work, thrust a jig into Ted's hand and remarked, "Heave on that while I take it in." Ted heaved until the manila line creaked. Jerry made fast, and then rose quickly, feeling that the time for action had come.

With his right arm thrown forcibly around Ted's neck, he bore down on him. Simultaneously he kicked the outraged youth's feet out from under. Ted fell heavily to the deck, and Jerry was on him like a flash, pinning him

down.

"Look here, son," said Jerry, "I don't want to knock the tar out of you, because I need your help. But I'm in training and you're soft as a jellyfish. When we go ashore in the States you can hammer the daylights out of me if you want to. Just remember now that I'm master of this hooker, and that I'll stay master if I have to break your ribs to do it. Have you got that straight?"

straight?"
Ted lay still a moment, getting back his breath
and thinking it over. "All right," said he,
"I'll take you up on that. I'll string along,
and when we get home I'll brain you."

CHAPTER FOUR

Roger Gives In

UKE'S promotion had deprived Olsen of an assistant at meal times, and the Swede was none too well pleased with the arrangement. With a loquacity born of years of talking to reluctant galley stoves and refractory ment. With a loquacity born of years of talk-ing to reluctant galley stoves and refractory stew pots, he opened up at breakfast time to air his grievances. Standing in the galley doorway, chef's cap pushed back, his pale fore-head beaded with perspiration, and his gray-ing mustache bristling fiercely, the cook

remarked:
"Listen, Mr. Dyer—can't all hands eat together? Do I serve chow all day long?"
"We're all here except Mr. Livingston," remarked C. J., mildly. "Luke is at the wheel, and he and the captain will eat forward as usual. I don't see, Olsen, that you have much to complain about."
"It's that Mr. Livingston I'm complaining about. Does he cat any time?"
"He—er—well, Mr. Livingston has put himself under hack. He will eat when he's ready to work."

ready to work.

ready to work."

The bulkheads of the after quarters of the Desire were not thick, and the response to C. J.'s remark was immediate. A buzzer rang violently in the galley. Olsen, turning his head to look at the indicator, declared, "That's him right now. Maybe he would like breakfast in bed."

"See what he waster," said C. I.

like breakfast in bed."
"See what he wants," said C. J.
Olsen passed through the saloon, removing his white cap from force of habit, and knocked at Roger's door.

It opened slightly, and those at table heard him order: "Bring my breakfast here, Olsen. I'll have grapefruit, cereal, two poached eggs and coffee. Oh, yes, and a little toast and iam."

The door slammed shut before Olsen could answer aye, yes, or no. He returned and took up his place in the galley doorway, hands on his

The young gentleman is feeling very Ritzy, and declared. But he forgot to order straw he declared. berries and cream.

berries and cream."

It was remarkable how C. J.'s temper had improved since getting under way. Instead of striding angrily to Roger's door to reiterate that he would eat only when he worked, the elderly yachtsman declared softly to Olsen, "Take him a pot of raw poratoes and tell him to peel them."

The first smile of the morning brightened Olsen's dour face. He disappeared within the galley, to return a moment later with an eight-

galley, to return a moment later with an eightgailey, to return a moment later with an eight quart pot heaped with small potatoes. Rapping softly at the stateroom door, he said in honey tones, "Here's your fruit, Mr. Livingston. Wil you open, please?"

The latch turned, and the door swung ajar

The latch turned, and the door swung ajar. Instantly Olsen thrust his knee against it and shoved the pot inside. "The owner says you peel them," he exclaimed. "Afterwards you eat them if you get hungry. Haw, haw, haw!" Olsen slammed the door shut and returned to the galley. But his triumph was short-lived. Again the door swung open, and pot and potatoes crashed against the bulkhead opposite. The pot came to rest with a final clang, but the potatoes rolled back and forth in the passageway with the motion of the ship.

poratoes rolled back and forth in the passage-way with the motion of the ship.

Meanwhile Jerry and Luke had the deck to themselves. Under a steady and gentle breeze from the northwest the Desire sailed west-erly on the starboard tack, the island of San Miguel receding astern, and the wide horizon unbroken ahead of her. With his crew green and partly mutinous, Jerry had considered it not to set the topsails, but under her four lowers the schooner made good time through the smooth water. So sailing, she was a sight to

His breakfast over, Ted appeared. "Morning, ficers," he remarked cheerfully, raising a hand o his hatless head. "Anything I can do to

"Yes," said Jerry, "relieve Luke at the wheel, so that he can get some sleep. Did you ever

"I can steer a car," said Ted, "and I used to ride a bike. I'll make out fine."

The exchange was made, Luke remarking auto-matically, "By the wind."

Ted, gripping the spokes after Luke had gone, ruminated. "Buy the wind," he repeated.
"What would I do if I had to sell it short?"

"You're pinching her now," said Jerry. "Pay her off. The luft's lifting." "Say that again in English," requested Ted. "I'm over my depth."

"I'm over my depth."

Whereupon Jerry launched into a definition of nautical terms and a demonstration of sailing which lasted throughout the forenoon watch. Before long Ted was steering with some intelligence and with decided interest.

gence and with decided interest.

But Roger showed no intention of being a sport. When Jerry went below he stepped to Roger's door and knocked briskly.

A whisper answered, "Is that my dinner?" "This is your skipper," replied Jerry, winking owlishly at the closed stateroom door.

He put his hand to the door knob and turned it quietly. But the lock was thrown and the door stayed shut.

A moment's silence followed then a specific.

For just a second Jerry thought that over.

will be empty."

For just a second Jerry thought that over. Then he lunged against the door. The jamb cracked, splinters flying inside, and the door slammed open.

"Come with me," said Jerry. To clinch the matter he seized the rebellious Roger by his shirt collar and dragged him through the doorway and toward the ladder. Kicking and yelling vociferously, Roger reached the deck. The rumpus brought out C. J., sleepy-eyed, and Budge Hale. Even Olsen poked his head out of the booby hatch and, peering around the foremast, watched the affair with interest.

Roger's spiteful tongue went on. "This is news for you, C. J. I spent the morning running your water tanks dry—and that means going back to port and a steamer for mine."

Without a word from C. J., Jerry dropped below to sound the tanks. While he was gone Roger and his antagonists stood frozen in their places, speechless. There is almost no sin at sea to compare with wanton waste of water.

Jerry returned.

Jerry returned

Jerry returned.
"What about it?" asked C. J.
"About a hundred gallons gone. But there's plenty left to get us to the States."
"Remove the pump from his stateroom. He'll

"Remove the pump from his stateroom. He'll wash in salt water hereafter."
Suddenly Roger laughed, loudly, hysterically. The others eyed him. "All right," he gasped. "I give up. It took the whole lot of you to beat me, but I'm licked. Show me some work and give me something to eat."
Unnoticed, Olsen had slipped aft. "Now about them potatoes, Mr. Dyer," he began with his usual effrontery. "They's a lot of 'em to be peeled for supper. Give me that Lilyvite for this afternoon."
"Take him." snapped C. I.

Take him," snapped C. J.

CHAPTER FIVE

An Accident

AYS of pleasant weather ensued, and to all outward appearance the ship was a happy one. Ted sometimes nodded during his trick at the wheel, to be roused by Jerry's sharp command or the rumble of the canvas. Luke developed an interest in navigation and from C. J. learned the use of a sextant; but when he discovered that its simple power sinks his angle. discovered that in simultaneous sights his angle was always ten miles or so away from C. J.'s he concluded that mastery of the science was beyond his reach.

yond his reach.

Contrary to Luke's expectations, Roger, once he had submitted to his unpleasant lot, became a willing deck hand, constantly inquiring into the functions of sails and rigging. Luke was particularly pleased when Roger's questions took the form of 'What would happen if—' For it is a good sailor who imagines difficult situations and learns in advance the way out of them. The first problem proposed by Lilywhite was, 'What would happen if the mainsheet broke' "What would happen if the mainsheet broke? Would it dismast us?" The answer to this being "No," Roger continued: "But suppose you forgot to set up your backstays and preventers [CONTINUED ON PAGE 450]

₹ THE OUT-OF-DOORS ₹

Food is Easy to Find If You Know Where to Look for It

FEW people who have not spent all their time in the woods, and not all of them, know half the natural foods found growing wild. I have known a man to get lost in Minnesota woods and nearly starve before getting out when he could have gathered a satisfying meal at any time had he known how. In the first place, he had matches and easily could have started a cooking fire in ten minutes. In the

easily could have started a cook-ing fire in ten minutes. In the second place he could have caught the same kind of big frogs for whose legs he paid a high price in New York. Then again he walked through a wide thicket of hazel bushes all loaded down with nuts, as good and nourishing as costly filberts.

Let us suppose that you lose your way on the Mohave Desert,

your way on the Mohave Desert, for instance. What could you find to eat there? Look at that prickly-pear cactus and note the fat little pears with tiny fragments of petals still sticking to their ends. Cut one off with your knife after stabbing it with a sharpened stick to keep it out of the dirt; peel it and eat it. Its flavor could be improved, but it is capable of sustaining life.

taining life

Do you see that patch of straight sticks, each

Do you see that patch of straight sticks, each bearing a button on top and numerous rings at intervals below the button? Spread a handkerchief on the ground and with your hand beat the rings and button. Seeds about as large as those of mustard plants fall out—chia-sage seeds, for hundreds of years one of the most nourishing vegetable foods known to the Indians.

Then there is the root heart of the agave, or century plant, which, roasted for a long time in a pit, will feed a family for days. Do not starve simply because your food supply does not look appetizing. The ignoble chuckwalla, a lizard of repulsive aspect, is hideous but edible, like his cousin the iguana of Mexico. Even the rattlesnake has afforded more than one good meal, its meat being as white and tender as appring chicken.

spring chicken.

In the forests from New Brunswick to Vancouver there are raspberries, blackberries, ground strawberries, huckleberries, blueberries, salmon-berries, service berries, June berries, haws, crabapples, plums, gooseberries. Walnuts, hickory nuts, beechnuts, hazelnuts, pecans grow in various parts of the country. In the ground there is the camas root of the Indians, and the leek or wild onion. To one who is able to distinguish between the edible and poison there remain the mushrooms, but do not touch any of them unless you are sure that you know which ones are safe. This is not a complete list of wild foods—there is no space for that—but it will give you some idea of the feast which Nature can spread for you—if you know how to ask her. apples, plums, gooseberries. Walnuts, hickory nuts, beechnuts, hazelnuts, pecans grow in

for you-if you know how to ask her.



Wild Honey How to Collect It Safely

TRAILING a bee to his home in a hollow tree

TRAILING a bee to his home in a hollow tree is an ancient trick, and many a man has gathered a large store of honey through doing it. Late summer is better than springtime, for the honey in store is at its largest bulk and weight. The first requisite is a little box of thin wood, about two inches wide, one inch deep and three inches long, with grooved sides in which a glass cover slides. The next is a tip hox with a reserver slides. cover slides. The next is a tin box with a per-forated cover, or an old salt-shaker emptied for the occasion. Put flour in the shaker and a dab of honey in the box and you are ready for the

Search until you find water where bees come

to drink, or some late-blooming flower that they like. Pull the glass slide out halfway, scoop a bee into the open end and close the slide. Set the box on the ground and allow the bee to take a load of hone

a load of honey.

Now have the flour-shaker ready and gently draw the slide out to expose the bee. Quickly shake flour on its back and watch which way it flies. Shut the box and follow the bee, keeping close watch for other bees. When you find one repeat the operation with the box and flour, and keep on doing this until you come to a place where you can see bees flying above you in the same direction.

Presently you will see the bees particular tree will show a dark spot where the passage of multi-tudes has discolored the bark or wood about a hole of some kind. If a thump against the tree near the hole starts a deep humming sound, you may know that it is a bee tree and probably is full of honey.

Mark the tree well and go back for your outfit, which would be for your outfit, which would be too cumbersome to carry while trailing bees. You will need mosquito nets rigged over straw hats, with drapes below, to be pinned to coats; also leather gloves, leggings or puttees, and a bee smoker, which is a combination of hand bellows and fumigator box.

Before donning the bee armor, chop the tree down, first getting permission from the owner.

Before donning the bee armor, chop the tree down, first getting permission from the owner of the land if it is privately owned, or from a ranger if it is part of a national forest. When it falls, hustle into your nets and gloves, light the smudge fire and hurry up to the hive. Work the bellows gently and put the nozzle into the hole. Smoke the bees until they grow less animated and the hum loses its vindictive resentment.

The hollow tree may have split in falling, but if not you must chop in above and below the entrance and split off a slab. A small galvanized tub or two pails must be ready to receive the

tub or two pails must be ready to receive the honey taken out.

Bites



ble. The best known of these are poison ivy, poison oak, nettles, water hemlock, and a few others. Some people are very sensitive to the ivy; others are almost or quite immune. The poison produces little blisters on the skin and spreads as the water discharge covers more skin surface. I have found that a coating of olive oil saved my skin almost wholly from being affected, and that when it did become affected olive oil, applied immediately after a thorough and careful and proposed to the complete of the course of the complete of the course of

my skin almost wholly from being affected, and that when it did become affected olive oil, applied immediately after a thorough and careful washing, had excellent curative effects.

Poison oak, growing in bush form, is exceedingly virulent to some persons—much more so than poison ivy—and people with sensitive skins should avoid all contact with either the vine or the bush. In addition it is a good plan to rub olive oil over face, hands and wrists before starting into territory where these plants grow.

Nettles are merely irritating, producing no lasting rash or sore. A bottle of ammonia is a fine thing to have convenient for nettle rash, as well as for any sort of stinging, whether from plant or insect. I know of no better remedy for hornet, wasp or be stings.

If you are riding a horse and cross a creek where a pale-green stalk rises perhaps four to five feet high, with a hemispherical dome of white flowers on top, do not let your horse nibble it, as he is almost sure to do if allowed. It is water hemlock and is deadly to a horse. It is a water plant growing only in marshy places, so far as I know, and as its name indicates

If you are in snake country, carry one of the hypodermic needle sets sold by almost every

If you are in snake country, carry one of the hypodermic needle sets sold by almost every sporting-goods house. There will be needle, permanganate of potash, lancet and bandage in the set, and it is a sure cure for rattler bites if used according to directions. E. E. HARRIMAN

Self-starters concentrating upon one single tree, and a little study of that particular tree will show a dark



Keds "Royal Tread"

Here's a tough pair! Bears for punishment! Have a specially moulded safety-sole with unusual anti-skid qualities. This model loves fast footwork and troublesome trails. "Feltex" insole, reinforced toe and black athletic trimming, are other features of the sturdy Keds "Royal Tread."

good athletic engine!



Keds "Gladiator"

A medium price, sturdy shoe for all-round use. Patented "Feltex" insole keeps the feet cool and comfortable. Reinforced toe gives extra protection at point of hardest service. Special anti-skid sole.



Keds "Shortstop"

Note the special safety-sole. Keeps your feet cool and gives them protection whether you're playing baseball or tak-ing the jolts of the trail.



Keds "Mercury"

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in coming about. Wouldn't that be very

'It certainly would," was Luke's reply. a hard chance with the wind astern it might get us into a lot of trouble. That's why we're always so careful." Roger refrained from asking exactly what Luke meant by "a lot of trouble" and changed the subject to something else.

and changed the subject to something else.

During these first days the wind was westerly and gentle, and progress was correspondingly slow. When the wind did finally haul around into the east and commence to breeze up, the shift was greeted with delight by all hands. Mr. Dyer had elected to sail to New York by the direct route instead of working south to the Trades. Seven days of beating had put the Desire less than four hundred miles along her way. Two days of a northeaster (if it lasted so long) would advance them another four hundred miles. ld advance them another four hundred mil and the total distance to their destination would be reduced a third. But the boat would have to be sailed instead of jogged.

At four of the morning, when the watch changed and all hands were on deck, Jerry put the proposition to Mr. Dyer. "We've had this fair wind," said he, "since about two this morning, and we've averaged better than seven knots under our lowers. If we are main towers! under our lowers. If we set main topsail, balloon fisherman and balloon jib, we can do close to twelve—especially if she breezes up a bit. But we'll have to work like dogs and per-haps stand double watches for a while. How

"Do you think the easterly will last long enough to make it worth the trouble and the risk?" asked C. J., doubtfully. "We're in no par-

cular hurry."
Roger took advantage of the morning twilight Roger took advantage of the morning twilight to indulge in a contemptuous grin, which changed to an expression of disgust when Jerry replied, "We may not have another chance like this in two weeks. If we no more than get the kites on her, it will be worth it."

"Another month of this," thought Roger, "and not a steamer sighted yet." Aloud he said, "Let's set every sail we've got."

"That's the proper spirit, Roger," said C. J. "You're improving every day. Jerry, I think we can chance it."

can chance it.

So saying, the owner took the wheel, while Jerry and the boys began breaking out the light sails from the lazarette. It was hard work and unaccustomed, but before the watch was half over the Desire staggered under such a cloud of canvas as three, at least, of her crew had never seen before. The wind on her starboard quarter, a sense of hurry began to possess her. Broken water fell away from the bow, alternately whispering and roaring. The boiling wake, foamflaked, wriggled over the seas astern. With the advancing day the wind built up, and as it increased the bulging sails strained at their mighty work, while the rigging hummed.
Knowing what it would mean in danger to crew and gear to shorten sail in a lively blow,

crew and gear to shorten sail in a lively blow, Luke, after Jerry had gone below, kept an anxious eyes on sky and sea. Looking aloft at the mountains of canvas, he marveled for the thousandth time at the strength of the preventer stay—a slender strand of steel wire leading from the maintopmast to a fourfold hemp tackle at the weather quarter. He translated its strength into terms of speed and considered it the equivalent of a hundred miles a day. Without the preventer stay to support the topmasts the kites could not be set. Without the kites the Desire would be loafing. crew and gear to shorten sail in a lively

could not be set. Without the kites the Desire would be loafing.

The hours sped, and the starboard watch came on, Jerry alert, the other sleepy. "If we keep this up—" began Luke, turning over the watch to Jerry. "Marvelous," agreed his friend. "We're making knots."

Neither liked to prophesy. Both knew that if the wind increased they could not keep it up. Luke went aloft to look for signs of chafe. The came was standing it. At noon, when he came

Luke went aloft to look for signs of chafe. The gear was standing it. At noon, when he came on again, the sky was overcast and the sea was higher. A steamer had been picked up, west-bound like themselves—a low-powered steamer, said Jerry, on the track from Gibraltar. She wallowed crazily, and as her bow dipped she threw her propeller out of water. The Desire gained rapidly upon her. All hands remained on deck to watch the passing. Here was competition—sail against steam, the old against the new. And sail was winning, running with stlent grace while the steamer rolled and struggled. "Come on, wind," cried Ted. "We'll show 'em."

Roger sat on the deck beside Budge at the weather quarter, watching intently. "She's clumsy," said he, but she'll get there just the same. I'll swap berths with anybody on

'If this wind holds," argued Budge, "she'll be hull down by night. I wouldn't swap. Why, at this rate we're making two hundred and fifty miles a day. In eight days we'll reach New York." Budge didn't mind prophesying.

SHANGHAIED

Nobody was a witness to what Roger Liv-ngston did then. From his pocket he drew a mife. Surreptitiously he opened it and laid it on the deck beside him, covering it with his land. As Luke had done earlier in the day, hand. As Luke had done earlier in the day, Roger looked aloft at the preventer stay, stretched taut as a fiddle string with the weight of the wind in the topsails.

"It's worth trying," thought Roger—but unconsciously he spoke the thought aloud. Budge looked over his shoulder at him.

"What's that?" he asked.

"I say," said Roger, "we're certainly flying. Look at 'em all watching us."

DUDGE looked away again, and Roger grasped his knife. Across the hemp preventer tackle he drew its sharp edge; twice; three times. He closed the knife and slipped it into his pocket as he rose to his feet. Despite himself he trembled. "Pretty exciting," said he. "Budge, let's get our cameras."

Roger moved forward, not knowing what the preventer tackle would do when it let go. "Fine." said Budge, springing to his feet and

said Budge, springing to his feet and Roger. "I'll go aloft and take some 'Fine."

Fine, sate budge, Tall go aloft and take some pictures from the crosstrees.

"Don't," said Roger, turning and clutching him. His eye sped to the cut tackle and he saw

that the hemp was fraying.
"What are you scared of?" asked Budge.
"It's swell up there."

Levy seeding heard the conversation "Don's

Jerry, steering, heard the conversation. "Don't go aloft," he advised. "We've got to take in the balloon fisherman soon. It's breezing up

the balloon hisherman soon. It's breezing up too—"

The yacht jarred violently, as if she had run upon a rock. With the whistle of death the preventer stay whipped aloft. The mainmast snapped at the hounds and the topmast toppled forward. A wild jumble of reports, whines, and rumbles filled the air. The face of the captain, Jerry, took on the pallor of death and he felt the grip of sudden fright. But his wits did not fail him. Spoke by spoke he ground the wheel down. As the yacht came on the wind the hollow thunder of the balloon jib was added to the frenzied flapping of the topsails—to the pound of the main gaff against the mast.

The color flooded back into Jerry's cheeks. "Please take her, sir," said he, "and keep her so. I'll try to save something."

C. J. had felt the preventer stay shriek past his ear. His jaw set. "Do what you can, boy," said he, taking the wheel. "It was my fault for letting you carry so much sail." It was decent of C. J. to call it his fault, but Jerry could read between his words.

He looked aloft and groaned when he compre-

read between his words.

He looked aloft and groaned when he comprehended the full extent of the damage. The broken topmast inclined downward from the broken topmast inclined downward from the foreside of the mainmast, its shrouds tangled around it. The leach of the mainsail was badly torn. The topsail halyard had let go, and the sail flapped in hopeless confusion, over the cross-trees, and tangled in the lee shrouds. Worst of all, the balloon fisherman, made of light cotton, showed a dozen rips as it dangled from the foremast, and every time the broken topmast whipped about it tore the fisherman again. Only the foresail and the headsails were unharmed, and these demanded the first attention.

Letty's seaman sense gave him the key to the

narmed, and these demanded the first attention.

Jerry's seaman sense gave him the key to the situation. "Luke," he yelled, "take the end of that broken preventer tackle, lay aloft, and secure the topmast. The rest of you help me with the headsails."

with the headsails."

Not more than a minute had elapsed since the catastrophe, and Budge and Ted were still shaken by the suddenness of it. But at the word of command they rushed forward. Not so Roger. In full possession of his faculties he cried:

"Don't let that steamer get away. They'll have to take us aboard." But Jerry paid him no heed. Already he was halfway to the bowsprit, and in another instant halfway to the bowspirt, and in another instant he and Budge were smothering the billowing ballooner as Ted lowered away. The forestaysail came in next, and by that time Olsen, who had come on deck with the first crash, succeeded, with Ted's help, in handling the badly torn balloon fisherman. In the meanwhile Luke had succeeded in passing a bight around the broken topmast and lashing it tight to the lee shrouds. He descended to confer with Jerry about the next most important thing and arrived on deck just as Roger came up from below with a suitjust as Roger came up from below with a suit-

just as Roger came up from below with a suitcase in his grasp.

"Taking a trip, Roger?" asked Luke, derisively. "Where were you thinking of going?"

"Why, we're all going; aren't we?" asked
Roger. "Look at the steamer waiting for us,
and look at the mess we're in."

C. J. overheard and left the wheel. There was
little use for a helmsman. With nothing but
the damaged mainsail set, the Desire would not
handle. "Boy," he said, sorrowfully, "don't
tell me you would desert a ship in distress."

Across the water came a question: "Can I
help you?"

Across the water came a question: Can I help you?"
"Yes," shouted Roger. "Take me aboard."
"No, thank you, Captain," roared C. J., covering Roger's lighter voice. "We're making out all right."
"When see you bound?" came the cell

out all right.
"Where are you bound?" came the call.
"New York from Ponta Delgada."
With the next question the captain's voice
came less strongly, for the ship, having come
back, was turning in a wide circle. "Sure I
can't help you?" he called.
"Yes," said Roger. "Take me aboard. I can
ray you well."

pay you well." No," roar

res, said Roger. Take me aboard. I can pay you well."

"No," roared C. J., simultaneously. "We have everything we need. What's a topmast to a well-found boat?"

They got the mainsail and topsail down and lowered the topmast to the deck.

Before morning the fine easterly had petered out, and daybreak found the Desire flapping empty canvas over a silently heaving sea. Again the work went on. All the wreckage had been cleared away, but there were hours of labor in sewing the mainsail and in securing the peak halyard blocks to the mainmast a few inches below the broken stump. Night and a westerly wind came in together, as the exhausted crew of the schooner tied down a reef in the mainsail and hoisted up the shortened mast. Hencesail and hoisted up the shortened mast. Hence-forth they would sail with one reef down, though the wind blew only in lightest zephyrs. Hereafter they would make seven knots only when they were extremely lucky.

CHAPTER SIX

"Man Overboard!"

"Man Overboard!"

I'was characteristic of Jerry that he blamed himself for carrying sail too long and crippling the Desire. After it was all over Luke's suspicions of Roger returned, and he examined carefully the preventer tackle that had let go and brought about the disaster. But both parts of the severed tackle had been used as temporary lashings for gear that had gone adrift. Consequently their ends were so frayed out as to leave no trace of the keen blade that had started the trouble. Roger, therefore, went unaccused. For days after the event, while the yacht beat her slow way westward, he carried his head as high as ever. Then something wrung an involuntary confession from him.

On a late afternoon of the third week of laborious cruising Ted was at the wheel with

Roger standing beside him when C. J. went forward for a sight of the westering sun. C. J. went anywhere about the ship to take sights, and all were accustomed to his orders to "luff her up a bit" or "hold her off" to shift the shadow of a sail and give him a clear view of sun and horizon. This time the owner stood by the lee side of the foremast and called with some irritation, "Ted, can't you see that the jib's in my way? Shake her a bit, but for Heaven's sake keep your eyes open and don't get her in

my way? Shake her a bit, but for Heaven's sake keep your eyes open and don't get her in irons."

Ted's interest in sailing had been flagging during these slow days, and he put the helm down with irritation equal to C. J.'s. "Doggone it," he said to Roger, "the old boy's always fussing about with his sextant, and I'll bet a dollar he doesn't know yet which ocean we're in. I'm getting fed up. I'd like to crown him with one of the jib sheet blocks."

As he spoke the jib shook and the lee sheet block began to dance two or three feet from C. J.'s head. Ted, meaning no injury to his host, brought the helm up quickly, and the sail filled, putting the block to sleep. But the danger to the man standing within its reach had not passed before C. J. shouted, "Watch it, I tell you. Do you want to kill me?"

"Sure," said Ted, lazily, to Roger. "That's what I'm trying to do. I always kills 'em when they make me work." His words were the idlest chatter, impudent, but harmless. But to Roger, who had something on his conscience, they seemed serious.

The next instant Ted's mind wandered again. The yacht, under his careless handling, shot into the very ever of the wind. and the jib blocks

The next instant Ted's mind wandered again. The yacht, under his careless handling, shot into the very eye of the wind, and the jib blocks began the wildest thrashing. Too late C. J ducked. The lee block, whipping with terrific force through a four-foot arc, struck his sextant and drove one of its many sharp points against his right eye. Howling with pain, C. J. staggered about the deck.

And in that instant Roger's confession burst spontaneously from his lips. "That's rotten, Ted," he shouted. "What I did to the stay didn't hurt anybody. But look—"

The boy broke off, running forward with all his might, for his guardian was staggering blindly near the ship's lee rail. Ted, conscience-stricken by his carelessness, tried his poor best

blindly near the ship's lee rail. Ted, conscience-stricken by his carelessness, tried his poor best to bring the vessel back on the wind. It was a lucky thing for two lives that he was unable to control her. For there were sharks about. As Roger ran forward, C. J.'s feet bumped against the gunwale. Blinded by pain, he could not regain his balance. Overboard he fell, one clutching hand missing the lee shroud by inches, the other held to his eye. And Roger, with all the impetus of his run, dived over after him. With two strokes he was upon C. J. and

with all the impetus of his run, dived over after him. With two strokes he was upon C. J. and had seized him from behind. He reached out a hand and tried to seize the yacht's side. Its slippery surface mocked him. But at least it was not running away from him.

"Man overboard!" yelled Ted, and Jerry and Luke came running. With deft movements of his fingers Jerry cast a bowline in a halyard and tossed it over. C. J. was helpless, but he was an old enough hand not to fight his rescuer. Roger got the bowline under the injured man's arms. Treading water with his feet, he held him up. Luke and Jerry tugged, and as C. J.'s limp and dripping legs left the water Jerry clutched him under the shoulders. With one mighty heave the injured man was stretched on deck.

And now a cry of terror came from the water

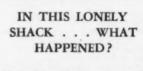
the injured man was stretched on deck.
And now a cry of terror came from the water
alongside. Roger, his face as pale as death, his
eyes bulging, lashed about with arms and legs.
Beneath the water a dark form rushed at him.
Again Roger cried and beat the water with his
hands. The shark swerved aside. "Quick!" he shouted.

The rope shot to him. He grabbed it. The two on deck began to pull. "He's coming again," Roger panted, and let go the rope to splash the water. Again the shark swerved off. "Grab it," yelled Jerry. "We'll get you

out."
Roger seized the rope. "He'll get my legs!"
he cried. But Luke and Jerry heaved, and he
left the water. Leaning over, Jerry seized one
wrist. Up the imperiled boy came. But the
shark came faster. His torpedo-shaped body
plunged out of the water, twisting as it came,
and his yellow teeth showed. Roger kicked
madly. His cry was enough to split the eardrums. He fell to the deck unconscious.
When Roger came to he was lying in his bunk,
and the pungent smell of iodine was in the
air. His right leg was numb. Below the
knee he could feel nothing. Jerry sar beside
him.

nim.
"How is it, old-timer?" he asked. "Making the grade better now?"
Roger turned his head again. "I guess I'm all right if my leg is. Lord, that shark had me scared."

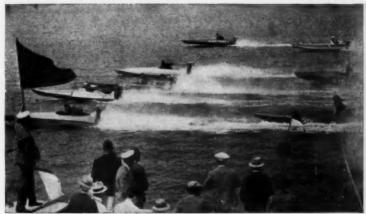
"I don't wonder. That was a sporting thing
[CONTINUED ON PAGE 452]



HER desperate race with death brought her at last to the boarded shack where kidnappers had hidden away Senator Kelton's daughter. Was she in time? Suppose she did succeed in getting side? What then—what could one slim girl do against a gang of criminals?

Carl H. Claudy has written a sequel to Pat Prentiss's Fortune. In September he continues the story of Pat, girl reporter on the *Times-Star*. Her adventure with the kidnappers is only the first of a series that end in a desperate battle with her old enemy, Boss Kelly, in which Pat stakes not only her fortune but her life on her job. If you were one of those who gasped over Pat's adventures in Carl Claudy's earlier story, you may not think that even this gifted writer can excel a story as fine as Pat Prentiss's Fortune. But you will change your mind when you read

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And entry in local regattas is only one of your two privileges. You may also enter the great National Regatta of the American Power Boat Association, to be held in Boston in the fall.

Association, to be held in Boston in the fall.

ASSOCIATION, to be held in Boston in the fall.

When you clip the coupon on this page and send it to the Outboard Motor Editor you receive in return the official racing rules of the American Power Boat Association and the Mississippi values power Boat Association and the Mississippi values power Boat Association and the Mississippi values power Boat Association. ley Power Boat Association. You receive also notification of the name of the official who is in charge of the district in which you live, and to whom you should apply for an entry blank. When you receive your racing number you can enter in as many or as few regettas as you

Getting up speed: a fast outboard motorboat undergoing trials just before the racing season

choose. Of course, the more you enter the better the possi-bility you will have of running up a high score. If you finish first, accord-ing to certified rec-ords, you receive ing to certified rec-ords, you receive a score of 400 points; if second, 361 points; if third, 324 points; and so on. (Mississippi different.) When

Valley scoring is slightly different.) When your record is certified you must immediately notify the Outboard Motor Editor of The Youth's Companion. He will submit your

YOUTH'S COMPANION. He will submit your record to official verification and will then send you an acknowledgment blank showing your total recorded score to date. Make careful insteryou can receive credit only after you have notified The Companion's Outboard Motor Editor and have had his official acknowledgment.

Your procedure for entry in the National Regarta to be held in New England is simpler. You still need your racing number. The fact that you have filled out and returned the coupon on this page (or the one in June or July) will be regarded as your official entry for The Companion's cup, so far as the magazine is concerned. Therefore, to the boy or girl between the ages of fifteen and eighteen who is registered, and who is the highest point scorer in the National Reis the highest point scorer in the National Regatta, The Companion will award its cup. Here is the only exception: both cups will not be awarded to the same individual. Should the National Regatta winner and the highest point score-winner in local regattas preceding be the same, the National Regatta cup will be awarded

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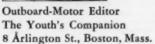
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for you to do, Roger. I don't mind telling you I haven't liked the way you acted about certain things, but this makes up."
"How is C. J.?" asked Roger.
"Well," said the captain, seriously, "he's a whole lot worse than you. I'm not a doctor, and so I don't know. But his right eyebrow is cut, and all around the eye it's swollen like an onion. The other one is black and blue. He can't use either of them."
"Gosh," said Roger. "How are you going to find your way home without him?"

can't use either of them."

"Gosh," said Roger. "How are you going to find your way home without him?"

Jerry's shoulders lifted significantly. "That's what's worrying me," he admitted. "Of course, we can hit somewhere just by sailing west. But it's going to take a long time, and I don't know how the supplies will hold out."

Roger thought of the morning, long before, that he had spent pumping good water into his basin. Another twinger and up his leg, and he

basin. Another twinge ran up his leg, and he closed his eyes. Jerry left.

THE hour was midnight. Olsen knelt on the floor beside C. J.'s bed to apply another compress. 'Now I tell you, Mr. Dyer,' he began, 'you're getting along fine. There's nothing cleaner or purer than this water from the middle of the ocean, and I can see your eye setting better already.'

can see your eye getting better already."
"That's more than I can," said C.
grimly. "Everything's as black as pitch.
"Sure it is with this bandage on. Now th
hot, and it'll hurt a bit, but the heat will di said C. J.,

C. J. gritted his teeth as the bandage was

T've seen men worse off than you, sir,"
Olsen consoled him. "But you'll be all right
once we get to New York. The doctors will take care of you."
"That's it," said C. J. to himself as Olsen

"That's it," said C. J. to himself as Olsen passed out of the stateroom. "Once we get to New York! I wonder if I could teach him to

navigate from memory."

Olsen walked forward along the narrow passageway. It still smelled of iodine, and as he passed Roger's open door he was reminded to look in. A piece of sailcloth tacked to the passed Roger's open door ne was reminded to look in. A piece of sailcloth tacked to the overhead kept the direct rays of a dome light overnead kept the direct rays of a dome light from striking the boy's face, but as the canvas swayed the shadows played grotesquely about it. Roger lay on his back, his eyes now shut, but with his mouth open. His lips moved, and as Olsen listened he heard the word

and as Olsen listened he neard the word "water" endlessly repeated.

The cook took a glass from the rack above the washbasin. The pump had been removed, but he stepped to Ted's stateroom alongside and pumped quietly. No water came. Olsen pumped with short, rapid jerks. Still no water. He stooped.

pumped with short, rapid jerks. Still no water. He stopped.
"So that tank's empty; and the boy's own fault. Well, I get some from the galley." A moment later he returned with a little fresh water in a tumbler and sprinkled some on the boy's lips. In his sleep Roger's mouth opened and shut, and his tongue eagerly sought his lips.

CHAPTER SEVEN

Empty Tanks!

THE night passed, and the day worked around to noon. Luke, the spare sextant in his nervous hands, stood on the quarter-deck and squinted at the sun. With the proper shade glass before the reflecting mirror it looked singularly green and cool, and Luke reflected grimly that he felt unusually green and hot.

C. J. had told Luke that a noon sight for latitude was the simplest thing on earth, and day after day the boy had watched the man step out, glance casually at the sun through the sextant

glance casually at the sun through the sextan and announce the noon position. But C. J. had known his longitude and could tell in advance the moment when the sun would be at its high-est. All that morning the blinded man had attempted to impress on the boy's mind the artempted to impress on the boy's mind the various steps necessary for working out a sight for longitude, and Luke had failed to follow him. He had glimmerings of what it was all about, but C. J. was unable to check his work for errors, and noon came with Luke as much in the dark as the stricken owner

So he had to watch the sun rise to its zenith and wait for it to dip on its downward path. At intervals of one minute he brought the green image of the sun to the heaving horizon, oscil-lated the sextant as C. J. had taught him to do lated the sextant as C. J. had taught him to do to catch the lowest point in the arc, and read the angle. The sun was still rising, little by little, but with each reading of the angle he saw that the movement was less. Finally for three consecutive sights the angle altered only infinitesimally upward, and then for the next two it seemed to stand still. And at last a reading of the vernier was ten seconds less than the previous reading, and Luke sighed with relief.

"It must be noon," said he to Ted, who was

'It must be noon," said he to Ted, who was

SHANGHAIED

[CONTINUED FROM PAGE 450]

at the wheel. Ted's steering had improved this last twenty hours, and what was care-free and casual about his manner had disappeared. He had been responsible for the accident that had nearly cost two lives, and he was further sobered

by Roger's involuntary confession.
"It's been a long morning," said he. "Where does the sight put us?" e sight put us?"
see, "said Luke, and, holding the sextant

Till see," said Luke, and, holding the sextant carefully, he disappeared below. Replacing the precious instrument in its box, he tapped at the door which led from the chart-

oom to C. J.'s stateroom. C. J. lay flat on his back, a clean handkerchief across his eyes. There was a smell of witch-hazel in the air. Perhaps Olsen had overdone the compresses. At any rate, the man's eyes burned like fury, although the swelling had



IF YOU LIKE ANIMALS

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FRIENDS OF THE BARRENS

actically subsided. "Is that you, Luke?" he

practically subsided. "Is that you, Luke?" he inquired. "Has she dipped?"
"Yes, sir," said the boy. "The last reading was sixty-five, twenty-three. Now what do I do?"
"Add twelve minutes to that for refraction and all that. It isn't exact, but twelve minutes is near enough."

is near enough."
"Sixty-five degrees and thirty-five minutes," said Luke Now read the chronometer. What does it

Luke stepped back into the chartroom, lifted the wooden lid of the box covering the highly accurate timepiece, and declared, "Two minutes

It's afternoon at Greenwich; so add twelve hours and call that sixteen hours and two minutes, Greenwich mean time. There's also a small correction for the amount the chro is slow, which you'll find on a slip of paper in the box. But let it go. This is good enough for

tude. Now look in the Nautical Almanac for the "Now look in the Nautical Almanac for the table headed 'Sun, August.' Find today and in the column headed 'C. G. T.' (that's 'Greenwich corrected time') put a pencil mark beside sixteen hours. In the next column, headed 'Sun's declination,' what's the angle?"

Luke examined the paper-covered booklet which is indispensable to the navigation of vessels and read aloud, "Plus thirteen degrees and three minutes."

and three minutes."
"Fine," said C. J. "Add that to ninety degrees (l'11 tell you why some other time) at you get one hundred and three degrees and thr minutes. Subtract your corrected altitude how much was that?"

how much was that?"
"Sixty-five, thirty-five."
"Yes. Subtract that from a hundred and three, three, and what do you get?"
Luke made the simple subtraction on paper and said, "I get thirty-seven degrees and twenty-eight minutes."

eight minutes."

'Fine," declared C. J., approvingly. "You've worked your first sight for latitude, and you know now that you are thirty-seven degrees and twenty-eight minutes north of the Equator. That puts you about east of Norfolk, but you won't know how far east you are until you learn how to take a morning or afternoon sight for longitude. But that's a good beginning."

Jerry, who was in charge when Luke reached the deck, immediately asked, "Well, navigator, where are we?" Jerry had always considered

navigation an occult science, but in his simple way he believed that anyone who, like Luke, had mastered the sextant could tell definitely a ship's location at any time.

"I only know the latitude, which puts us about three hundred miles north of Bermuda.

I say we go there."
"How far east of it are we?" was Jerry's ques-

"How far east of it are we transport ton.

"That's what I don't know. I tried all the morning to work sights for longitude and couldn't get any two of them to agree within two hundred miles. Longitude is awful."

"Well, then," asked Jerry after a moment's reflection, "how can we get to Bermuda?"

"I have an idea which sounds reasonable. If we go south until we get to the latitude of Bermuda, then we can go west until we run into it.

I know how to find latitude now, and we can't miss it."

I know how to find latitude now, and we can't miss it."

"No," returned Jerry, "unless we're west of it when we get to that latitude. Then we will be in the soup. We'll be going away from it all the time. And, Luke, there's a leak in that other tank. It's almost empty."

A frown appeared on Luke's serious face. "I knew one was empty, but I didn't know about the other one. Well, we've simply got to find Bermuda."

ND now there followed four days of slow A bearing to the southward when the for-titude of the able members of the crew was sorely tried. Upon discovery of the water shortage Jerry, taking no chances, rewater shortage Jerry, taking no chances, removed all pumps except that in the galley and rationed each man to one cup of water a day. Whatever fresh fruits had been taken on in the Azores had since been consumed, and the boys even before they began to feel thirsty were apprehensive in the thought of approaching hardship.

As regularly as the sun reached its zenith Luke observed it and announced his latitude.

Luke observed it and announced his latitude. But not till the fourth day did the result of the Luke observed it and announced his latitude. But not till the fourth day did the result of the noon sight give him the latitude of Bermuda,—thirty-two degrees and twenty minutes,—and this Luke announced with some uncertainty. On the ocean chart Bermuda looked like a tiny atom. Even if they had come down to eastward of it, thought the navigator, how could he hope to hit it? A scant twenty miles separates the northernmost from the southernmost shore of the islands of Bermuda. Ted and Budge, lacking Jerry's confidence in Luke, sensed his doubts and were sure that they were hopelessly lost.

Some cause for satisfaction was found in the gradual recovery of Roger. More by luck than by science his wound was kept free of infection, and by the fourth day the boy was well enough to be helped on deck, to lie on a mattress in the shade of the mainsail. Throughout his trying illness his thirst had been unquenchable. At all hours he had raised a querulous cry for water and never had he been given more than enough to moisten his parched mouth and throat.

C. J. was likewise on the mend. The cur above his eye healing, and the swellings subsiding, he had slowly regained the use of his

above his eye healing, and the swellings sub-siding, he had slowly regained the use of his eyes and begun to hope that perfect sight would be restored to him. But to avoid unnecessary strain he had kept to the cabin, only being helped on deck for a breath of air after nightfall. It had thus been easy to conceal from him the acute shortage of water. But when, the morning after Jerry's discovery, C. J. was handed a cup of tomato juice to quench his thirst he learned

"This is a good appetizer," said he to Olsen, who had brought the drink, "but I'll have some

who has become
water too."
"Now I tell you, Mr. Dyer," said the cook.
"We're getting along without water just now,
and drinking the juice from tomato cans. It's
just as good."
"You mean the water's all gone?" exclaimed

"You mean the water's all gone?" exclaimed C. J.
"Yes, sir, and we got just three cans of tomatoes to see us to Bermuda."
"Why didn't you tell me?" fumed C. J. He
brushed past Olsen, fumbled his path to the
stairway and mounted quickly on deck. But
the blinding brilliance of the open sunlight was
like a dagger at his eyes, and with closed lids
he groped his way below again.

In the chartroom the youthful captain and
mate found him peering confusedly at the

mate found him peering confusedly at the chart which lay upon the table, a hand over his right eye. There followed rapid-fire questions and answers about the navigation of the ship, the amount of fuel remaining for the auxiliary engine, and a dozen other topics of

vital import.
"I can't see much," he concluded, "but I

still have my judgment, and I can see this: you've made more westing than you think and have overshot the island. Put her about, Jerry, we must retrace our course to the east-ward."

ward."

Jerry made no reply, and C. J., with all the crossness of his convalescence, exclaimed, "Well, will you do as I say?"

The captain found tongue. "Do you think it's wise, sir?" he asked. "Luke is sure of his latitude, and I'm pretty sure from the course we've sailed that we're not as far west as Bermuda."

muda."
"You've had time since my accident to make the Carolina coast," retorted C. J. "I've been crazy to take things so casy."
"But we haven't been making any speed, sir, with our crippled rig," offered Jerry. "And I haven't dared use any gas as long as there was a breath of air." breath of air.

Whose fault is it that we haven't been mak-

"Whose fault is it that we haven't been making any speed?" asked C. J. But he added, "Never mind, we'll go on till noon, and I think my left eye will be good enough for a sight for latitude. Then I'll decide about putting back." Noon came. Luke stepped out on deck, sextant in hand, and began shooting the sun. With only one instrument in order, C. J. remained below and let the boy do the preliminary work. Sight after sight was taken as the any

mained below and let the boy do the preliminary work. Sight after sight was taken as the sun slowly mounted, and finally there came the moment when it dipped. "I've got it, sir," called Luke, reading his angle, and it's exactly sixty-eight degrees and forty-five minutes."

C. J. came up and took the sextant from him. He was not a figure to lend confidence to discouraged sailors, for his right eye was bandaged, and it was with obvious difficulty and pain that he squinted through the left. But by applying a shade glass directly to his telescope he was able to dim the noontime brilliance, and he declared himself equal to the occasion. Not more than a minute after noon he exclaimed: "I've

able to dim the noontime brilliance, and he de-clared himself equal to the occasion. Not more than a minute after noon he exclaimed: "I've got a good one. Now I'll go below and see how it checks with yours."

Handing the instrument to Luke with the warning not to joggle it, C. J. descended to the more grateful light of the chartroom, Luke fol-lowing after. "Now," he continued, "we'll read my angle." His eye watering, he studied the wernier carefully. But the more he studied the more blurred became its scale, and in the end Luke had to read the angle for him. Instead of sixty-eight degrees and forty-five minutes, the Luke had to read the angle for him. Instead of sixty-eight degrees and forty-five minutes, the boy found sixty-nine degrees—a difference of fiteen minutes of arc, which would put the ship fifteen miles south of its assumed position if C. J. were right and Luke wrong.

Leaving this difference in abeyance, Luke worked the sight, and announced, "There, sir, mine puts us right on the line with Bermuda and yours fifteen miles south of it. Which one will you take?"

C. J. reflected, gnawing his lip. Common

you take?"

C. J. reflected, gnawing his lip. Common sense told him to accept the boy's conclusion. But instinct seemed to assure him that, if Luke was right, the tiny islands should even now be visible over the horizon. "Has anybody been aloft this morning?" he asked.

"Yes, sir, I spent my entire watch in the fore crosstrees. Saw nothing but some birds."

"Did they have long, forked tails?"
"No tails at all."

No tails at all.

"No tails at all."
"Just as good. They were boobies—a sign that the islands are near. Luke, I admit my eye is bad, but I saw the sun kiss the horizon as clear as a bell. Since my altitude was greater than yours, I feel that it may not be noon even now, which would put us still farther south. So we'll start the motor and go north."
"Aye, aye, sir," said Luke, reluctantly. "Due north?"

north?"
"No," C. J. compromised. "If you're pretty sure of your dead reckoning we'll go northwest."
For the first time in nearly a month the motor began its droning song and the Desire got under way, steering northwest as C. J. had directed. There was fuel in the tanks for only fifty miles or so of running, and during all the days of light airs Jerry had hoarded it for a last emergency. Now, as he stood at the wheel, he mentally counted each precious drop trickling through the carburetor. the carburetor

the carburetor.

His eyes, always active when he was on deck, roamed to the sails, hanging motionless from their gaffs, and from them to the cloudless sky.

Then he glanced to the southern horizon and noticed the undulations of the big sleepy rollers. They looked like serpents crawling on a plain.

CHAPTER EIGHT

"Boness's Passage"

JERRY wondered about this sea. It couldn't be the aftermath of a storm and so was probably the forerunner of a bad disturbance. Waves will sometimes outrun a gale so far that the wind itself never catches up. He thought of the barometer and, rubbing his parched

tongue on his dry lips, asked Luke to con-

sult it.

Luke appeared on deck a moment later and before speaking watched the lift of the yacht to the sweeping swells. They were of such dimensions that the Desire, while lifting bodily to them, hardly rolled at all.

"What do you make of this sea, skipper?" asked the amateur navigator.

asked the amateur navigator.

asked the amateur navigator.
"Must be a gale a long way off," said Jerry.
"What's the glass say?"
"Twenty-nine, twelve. And it's dropping
fast. When I looked just before noon it was
29.50. That's a whale of a drop."
One thought flashed through the minds of both
boys, and Jerry asked, "What does Bowditch
say about hurricanes?"
"Well, it's the month for them. No doubt

boys, and Jerry asked, "What does Bowditch say about hurricanes?"
"Well, it's the month for them. No doubt about that. And a clear sky and a long swell are indications. I'll go aloft and see if we can see those doggoned islands."

As Luke climbed the rathines Jerry looked at the three novices of his crew and wondered what would be appear if she worker stored or it.

the three novices of his crew and wondered what would happen if the motor stopped, or if a storm blew them off the island. Never in his life had Jerry been so thirsty, and he knew that the crew were in a state worse than his. C. J. came on deck, and Jerry roused Ted to stretch a rope fore and aft so that the owner might pace up and down. Now and again C. J. raised his bandaged eyes to Luke and called, "See anything?"

ACH time the answer was, "Nothing, sir."

Luke, as one hour lengthened into two, looked less frequently ahead, and directed his searching glance more and more to port. That, he was convinced, was where the landfall would be made, if at all. If only, Luke thought, he could lift himself another hundred feet above the deck! Presently he came down and stood by lerry. ACH time the answer was, "Nothing, sir."

by Jerry.

"Nothing doing," said he, quietly. "But I notice that this ground swell is kind of dying out. False alarm, I guess."

"How about the glass?"

"That's what I came down for. I'll look."

"That's what I came down for. I'll look." He did so and again ranged himself beside Jerry. "The bottom's dropped out. Twenty-eight, eighty."

"The bottom's dropped out."

"Ouch!" said Jerry, exhaling violently.
"That's a rotten glass. There sure is wind coming. Funny about those long rollers dying down."
"Yes, the sea is practically still now. If I had my choice I'd be inside some landlocked harbor with about three anchors down."
"It isn't what you want," returned Jerry.
"It's what you get."

The what you get."

There was a sudden commotion forward, and Ted jumped to his feet. "Look!" he cried, pointing north. "Rain clouds. Can't you see 'em?"

Luke and Jerry followed the direction of his finger and exchanged expressive glances. "There's your wind," said Luke.

Jerry raised his voice. "All hands, there. Get the mainsail off her. Furl it tight."

C. J. paused in his stride and raised a corner of his bandage. "What does it look like?" he asked, seeing nothing.
"Clouds piling up very black to north'ard, sir. Dirty weather coming. Don't you think you'd better get below, Mr. Dyer?"

C. J. hesitated. "Well, perhaps. I can't be of any use here." He felt for the companionway and descended. "Better have Roger come below, too," he called, over his shoulder. Roger

ot any use here." He felt for the companionway and descended. "Better have Roger come below, too," he called, over his shoulder. Roger followed him, slowly.

Luke and Ted sprang to the main halyards, cast off, and the big sail came down easily. The clicking of the blocks brought Olsen on deck, and with a single glance to the north he jumped to the jib and lowered away. "Good man," called Jerry. "Now a reef in the fore. Lend a hand, Budge."

Panting from their exertion the state of the property of the state of the state

hand, Budge."

Panting from their exertion, they snuggled the canvas down and came aft to lean on the main boom and watch the darkening sky. By now the luster had disappeared from the sun, and a high, almost invisible film of cloud

"That looks like it," said C specifying what it looked like. is right down on the deck." said Olsen, without like. "I bet the glass

is right down on the deck."
"Twenty-eight, sixty a minute ago," returned Luke, "and still falling."
"Maybe we got too much sail," thought Olsen, aloud. "The first wallop might be awful."

"All right," Jerry caught him up. "Lower the jumbo. I just want to heave to until the worst of it passes."
"Maybe we don't even keep the foresail," said Olsen, leading the way forward, "but better we try it."

try it."

The jumbo was lowered, and then as the crew again gathered on the quarter-deck a feeling of unreality came over Budge. Here they were, motoring across a smooth sea, going they knew not where, and shortened down for the hardest

blow. It seemed foolish. "Even if there's no wind in that mess," said he, "I hope there's rain. I could drink a gallon."

But there was wind. Its first whisper came a minute later, while along the northern horizon the watchers saw an advancing! wall of white.

Above, blackness, ever, speeding, on the the watchers saw an advancing! wall of white. Above, blackness, ever spreading; on the horizon, this uncanny line of white spray. It leaped ahead with appalling rapidity, and the crew, fascinated, watched its coming. Now the sea writhed to windward, and the yacht stirred uneasily, as if awaking from a long sleep. Ierry maneuvered to meet the squall on the starboard bow. Blackness suddenly enveloped them, and the wind hit. Down went the yacht to her port rail. Jerry spun the wheel to bring her up, but for a long moment she lay there while a wall of spray whipped against her her up, but for a long moment she lay there while a wall of spray whipped against her weather side and eddied down her slanting deck. For the first time in his life Jerry felt a vessel completely out of control. Despite the churning propeller, the yacht slipped bodily to leeward, the angle of her heel increasing, and the sea, still almost smooth, climbing up her lee deck. Then relief came. With a tremendous roar the foresail let go at one of the reef points and blew out of its boltropes. The fore gaff whipped wildly back and forth. But the yacht regained an even keel, heading straight into the furious eye of the wind—and making sternway. "Take the wheel," shouted Jerry. "Olsen, get that gaff down before it tears the shrouds out of her."

get that gaff down before it tears the shrouds out of her."

Luke sprang to the wheel, and Jerry dropped into the lazarette. He reappeared, lugging the storm trisail. Ted and Budge helped him. A few minutes later Olsen, his job done, lent a hand. Ted had never imagined anything like this. He had to hold on to keep from being blown away. He marveled that Jerry and Olsen, despite the howling wind and pelting spray, could work together and toggle the trisail to the mast. Somehow they did it and bent the main throat halyard to the trisail head. Rain mingled with the spray, and all hands involuntarily licked it from their lips. Jerry rove a heavy line through the trisail clew for use as a sheet and crawled aft, taking several turns of the end around the port quarter bitt. Then, with the sail anugly fast in stops, he left Ted to lie across it while he and Olsen got a spitfire jib ready for hoisting on the jumbo halyard.

AN hour had passed—an hour of roaring wind and mounting sea. High and steep the seas were, as if they objected to being raised so fast. When she was in the hollows the seas were, as it they objected to being raised so fast. When she was in the hollows spray from their crests swept clear across the Desire. When she rose the wind buffeted her and knocked her down. All the time the rigging kept up a hollow drumming and the turnbuckles shrieked their melancholy dirges. As if tortured by demons, the yacht plunged and rolled in short, quick jerks.

When all was ready Jerry took advantage of the comparative lull in a trough and got the trisail on her. Of very heavy stuff, it held when the yacht rose, stiff as a sheet of laminated wood, bent in a steam box. Next the storm jib. It held. Jerry stopped the motor. He came aft and relieved Luke at the wheel.

"Corking work," said Luke.

"The best we can do. We're sagging to loo'ard like a train of cars. Look." Jerry pointed at the eddies in the water that seemed

pointed at the eddies in the water that seemed to swirl up to windward as the yacht drifted down the waves. "It's not good enough," said Luke, his mouth

to Jerry's ear. Jerry started in surprise. "What do you

"I've been thinking. That time the swell died out. That meant we were passing to north' ard of Bermuda. Not far away. Ground swell stopped by the islands," Luke shrugged his shoulders. "We're drifting down on 'em

Jetry pursed his lips as if whistling. No sound came. He put his mouth to Luke's ear. "If you'd had your way, we'd have steered straight for Bermuda and been inside before this struck."

Ted worked his way aft, holding fast to the boom. "Remember that southerly swell?" he asked Luke. "Why is this wind from the

north?"
"Hurricane working north. Wind rushing down to fill the low-pressure area."
Ted nodded. He went forward and hugged the mainmast, seeming to find comfort in its size and strength.
Luke grinned. There was courage in his grin. Also hopelessness. "If we're to north'ard of the islands, he yelled at Jerry, "there's ten miles of reefs between us and dry land."
Then Jerry shrugged. "Made your will?" he asked.

Hove to, her helm hard down, her jib sheeted CONTINUED ON PAGE 454]

Why we Indians ran our races barefoot"



N those carefree days before I came in contact with white civilization, we Indian boys used to harden our bodies for the severe lives we expected to lead as hunters and warriors. Our fathers would whip us with fir branches when we arose in the morning; in the winter we would take a snow bath. We would often set fire to fir needles on our hands and back and let them burn to an ash.

We ran many foot races and we always ran barefoot to toughen our feet and allow free play to muscular development.

The Pontine. Stylish light grey, khaki or brown, with snappy-The Relay. Rubber cleats on soles will accustom your feet "It was considered effeminate to bend our elbows-therefore we ran stiff-armed.

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to weather, the Desire drifted crab-wise. Luke, holding to the main boom, worked his way to the mast,

around Ted, and then to the weather rigging. Each step seemed like a mile. But there was work more arduous. He climbed aloft, pushing himself against the wind, which tried plaster him to the shrouds. The sky had lightened, but from the deck he could see nothing. ened, but from the deck ne could see holding.
All about was a cloud of spray like that rising from Niagara. Twenty feet up the ratlines the horizon widened. But he only saw more waves, cresting, tumbling. Long he searched to leeward. There, he was convinced, the land lay. ward. There, he was convinced, the land lay. But still he saw nothing—unless, perhaps, an exaggerated whiteness of the water, a more furious commotion of the waves. Yes, there could be no doubt of it. Reefs were there, less than a mile away. His heart skipped a beat.

Down he climbed and reached Jerry's side. "It's what I thought," said he. "The north reefs."

You were right, then. Well, so long, kid."

"You were right, then. Well, so long, kid."
"Motor won't help?" asked Luke.
"Not to claw off. You saw how we made sternway when it was going full bore."
"I'll start it anyway." Luke worked his way below, where he paused to acquaint C. J. and Roger with their dreadful situation. They sat at the foot of the companion, braced in the passageway. Luke started the motor, marveling at the absence of noise inside the yacht's stout bull. Suddenly the ship lay over, almost on hull. Suddenly the ship lay over, almost on her beam ends, poised there while he clambered to the companionway, and then righted to an even keel. On deck, the boy saw that Jerry was running for it, dead before the wind. With gathering speed the yacht leaped from wave top to hollow, the combers dividing at her stern and traveling faster still.

Ted and Budge stood, their arms around the mainmast, their eyes when they looked aft popping from their heads. Olsen clutched themain boom, shaking his grizzled head dismally. Their expressions said, more plainly than words, that they knew death when they saw it. hull Suddenly the ship lay over, almost on am ends, poised there while he clambered

Ahead the sea was a welter of foam. What-Ahead the sea was a welter of foam. Whatever regularity the waves had in deep water they lost in the clutch of the coral. Here a geyser leaped, there a hollow yawned, and everywhere the spume flew high. Jerry threw back his head to beckon Luke. He dared not take a hand from the wheel. Luke clung to him, straining his faculties to listen.

"If we drifted into it," shouted Jerry, "there woulde" he a chance. Running like this we

my difficulties and it, snouted Jerry, "there wouldn't be a chance. Running like this we may bounce over the first reefs and sink in shallow water inside. That's all I hope. Take the lee wheel and help me keep her off. If she broaches, we're goners."

the fee wheel and help me keep her oil. It she broaches, we're goners."

Luke grasped the wheel, standing shoulder to shoulder with Jerry. As if it were already happening he saw the consequences of a broach—the yacht broadside to the wind, engulfed by the first wave, rolled over and over, her sticks broken, her crew scattered in the spume, pushed down, and their lifeless bodies mangled on the

Less than a hundred yards separated them from

Less than a hundred yards separated them from the broken water of the outer reefs. Olsen, as if moving in a dream, closed tight the companion slide and resumed his grip of the boom. Luke's eyes met Jerry's in a mute farewell.

The yacht's stern litted up, a mountainous wave beneath it. Down plunged the bow. Was she going to pitchpole—turn end for end? thought Luke. No. The stern dropped and solid water rushed aboard. It tore at the helmsmen, swept Olsen's feet from under him. Where there had been a firm deck there was only tumbling water, foam-flecked, spray-lashed. As if in bling water, foam-flecked, spray-lashed. As if in agony the yacht trembled. Luke and Jerry could feel her bow starting to swing around. They wrestled with the wheel. Still the bow swung. The decks cleared, and now the yacht lay over

'Hard astarboard " shouted lerry Hard astarboard, shouted Jerry. Spoke by spoke they turned the wheel. Again the stern lifted to a wave. This one broke against the port quarter and eased the monumental task of the rudder. The laboring vessel straightened her course. Warily the boys brought the

ened her course. Warily the boys broughelm amidships.
Suddenly the motion eased. They quiet water. But Olsen, who had straddled the boom and was looking forward, shouted, "More breakers ahead. Smooth water to star-bond."

"Hard aport," yelled Jerry, and they turned the wheel the other way. Around the yacht

"Straighten up," cried Olsen. breakers dead ahead." breakers dead ahead."

Between two reefs they passed, and as a wave curled to break Luke glimpsed the pink and white of the uncovered coral.

"Hard aport again," yelled Olsen. "There's

SHANGHAIED

CONTINUED FROM PAGE 453

wheel, for this was back-breaking work, zigvariety, for this was back-reaking work, ag-zagging between the reefs. Once as they brought the wind on the port quarter the trisail jibed and hurled Olsen from the boom into the lee rigging. But he clung fast and a moment later climbed the ratlines. From there he indicated the shoals by an outstretched arm

TAND shot in sight ahead and the reefs thinned out. But with the increasing distance from the outer barrier the water roughened and the decks were swept con-

Haven't touched yet," shouted Jerry. "But we'll never make it.

That looks like a dockyard off to starboard,"

said Luke. 'Can we get in?'
'No. But I see two lines of buoys. We'
pass between and get the lee of an island, maybe. The companion slide opened a fraction, and Roger poked his head and one arm out. The arm he waved in a small circle. His ligs formed the words, "Motor's stopped. No more gas."

Jerry comprehended. Dead before the howling

Jerry comprehended. Dead before the howling hurricane, the yacht sped across Grassy Bay and dashed blindly into Stag Channel. Heaving breakers defined it on either hand. Somewhere beyond it lay shelter, but neither Luke nor Jerry knew where. At the last port-hand buoy they brought the helm up, and the trisail jibed. Now they shot across the wind to eastward. But with the trisail trimmed to weather, the press of wind on the yacht's stern was far too great, and the helm would not answer. The bow swung up to port and headed straight for the rocks in the lee of Cobblers Island. In vain the steersmen jammed the helm hard up. Black rocks, seas breaking over them, leaped out to meet the yacht. meet the vacht.

meet the yacht.

Ted, still hugging the mainmast, turned anxious eyes aft. They questioned Jerry, and Jerry found an answer to the question. With one hand he pointed at the trisail and motioned downward. "Knife," he shouted. "Cut it."

Ted understood. A knife whipped from his belt and he reached high at the luff of the sail. Down swept the knife and ripped the heavy canvas. Then, reaching aft, he drew the blade forward across the foot of the sail. The rip widened. Suddenly the sail blew out. Streamers of it whipped past Olsen and nearly tore him from his perch in the shrouds.

But the helm eased and the bow fell off, missing destruction by a yard. The wicked rocks

ing destruction by a yard. The wicked rocks slid by, baring their fangs in disappointed frenzy. Under the lee of Spanish Point the wind let up. "Anchors ready," called Jerry, and Ted and Olsen limped forward, their legs almost crumpling under them in their reaction from the

Luke's reaction was to leave the wheel and ouble up in hysterical laughter. "What next?" double up in hysterical laughter. "What next?" he gasped. "Or have we done anything wrong come through right?'

"Next" was a steamboat chugging out of Two Rocks Passage, seeming to move sidewise as her bow headed up to counteract leeway. She maneuvered astern of the Desire and came alongside to weather, negroes jumping from her deck with heavy lines. Up from below came C. J. and Roger, their faces pale as death. The captain of the steamboat called down, "We've been watching you come across the reefs. Either you flew or you found Boness's

Passage."
"We didn't know it was there," said Luke.
"It isn't," was the captain's response. "But during the war a sub-chaser commanded by a man named Boness rode a northerly gale clear across the reefs and got in safe. You're the first man named Boness rode a northerly gale clear across the reefs and got in safe. You're the first vessel that's done it since, and probably the last. Your ballast must be in horseshoes."

Jerry gripped Luke's shoulder. "We certainly are lucky, kid," said he.

Roger piped up, his voice husky. "Water, captain," he pleaded. "We nearly died of thirst."

That isn't what you nearly died of," the captain. But water was brought, and the parched, exhausted crew drank deep.

CHAPTER NINE

Port at Last

ABOVE all the accidents and the hardships of the voyage two scenes lived in the memory of those who had endured them. One was the headlong dash across the reefs when the wild seas crashed all about them but bore them out of danger. The other picture embraced Hamilton Harbor when, the hurricane thite of the uncovered coral.

"Hard aport again," yelled Olsen. "There's eefs everywhere."

Glad Jerry was that he had called Luke to the covery of his full sight if he took it

covery of his full sight if he took it easy for the next few weeks.

Now the owner sat in an easy chair on deck, dark glasses on his nose, pondering what he meant to say; and when he had made up his mind he called the boys. They came aft or up from the quarters and stood around him—with the exception of Roger. During the three days that they had lain in port the crew had been expecting an occasion like this, but none of them could guess what C. J. would have to say.

would have to say.

He began abruptly. "Budge, you have proved our mettle, and I'm proud of you. Yes, and Roger too. He came through handsomely. Ted, you nearly blinded me, but I only blame that on your inexperience. Now there's a steamer sailing Saturday, and I'm going to pay your passage home. But not before thanking all three of you for your loyal service. I do thank you, from the bottom of my heart."

Ted and Budge made diffident acknowledgment.

'Luke," said C. J., "your navigation was right, and mine was wrong. But it's a tricky bit of sailing from here to New York, and I've decided to hire a licensed captain and pick up a local crew to take me home. I'll give you your full wages, and I hope you'll realize that I have

full wages, and I hope you'll realize that I have nothing against you when I pay you off. I haven't. I admire you especially."

Luke reddened, but for every word of praise that C. J. spoke there was another word unspoken that Luke disliked. Somehow, he felt that a rebuke was about to be administered to Jerry—his friend Jerry, who had been the rock against which they all had leaned.

The rebuke came, after C. J. had thought in silence while the four boys stood uncomfortably around him. Jerry, "said the old man, choosing his words, "you have assumed great responsibilities and carried them off well in the main. But you know the unwritten law of the nain. But you know the unwritten law of the sea that when a great mistake is made it out-weighs even years of faithful service. You made your mistake when you insisted on carry-ing too much sail three weeks ago. I admit that the fault was partly my own, but it is ever a captain's duty to think of the safety of his ship. Your mistake crippled us, slowing us down so that all of us nearly paid for it with our lives. So I must pay you off. Do you understand my position?

position?"
"I do, sir," replied Jerry promptly, "and I don't blame you. I've been kicking myself ever since, and I'd be a fool to expect you to feel any different. I'll take my things ashore at once."
"Well, then, that's all." said C. J., with more than a shade of regret in his voice.
But, thanks to Ted, it wasn't all. As soon as he commenced to grasp the import of C. J.'s speech he had darted below and rushed in upon Roger, whom he found reading in the main saloon.

"Up you go, kid," he said, seizing Roger by the shoulders and despite the injury to his leg lifting him to his feet, "and admit that you did

"Did what? "Cut the backstay. You half admitted it that day I crowned C. J. Now Jerry's losing his

that day I crowned C. J. Now Jerry's losing his job for wrecking the ship."

"Let him lose it." The words came to Roger's lips, but remained unspoken. "All right," he amended, "I'm not afraid of C. J."

So, though Roger's confession came ungraciously and defiantly, it did come, and it cleared Jerry of the charge of careless seamanship. When he had listened C. J. thought hard and spoke quickly.

"Jerry," said he, "I was probably in the wrong before, and I certainly am now. If you want to take the Desire to New York you can do it."

do it."

Jerry hesitated only a moment. "T'll take her if Luke comes too."

C. J. looked at Luke. "Will you?"

Luke also hesitated. He had distrusted Roger from the first, and he wanted to say now that he would go if Roger didn't. But Lilywhite saved him the embarrassment. "Don't get around to asking me, C. J.," he interrupted, "because I'm taking the first steamer."

"Then I'll ship with you, Mr. Dyer," said Luke. "And glad to do it."

"Me too," piped up Budge.

"Then I It ship what you."
Luke. "And glad to do it."
"Me too," piped up Budge.
"You can count me in, C. J.," said Ted.
"Jerry and I have got it fixed for a grand scrap
when we get ashore, and I don't want to miss

Olsen, who had been unable to resist the Olsen, who had been unable to resist the gathering on the quarter deck, now stepped boldly into the circle. "And I want to tell you, Mr. Dyer," said he, "that you've got the finest crew I ever sailed with, and I'm pretty good myself. Sure I go with you."

Four boys talked excitedly on the deck of the Desire while the fifth, out of it, hobbled below. "I don't see what they find in yachting," said Roger, disgustedly. "I've never been so bored."

NOW YOU TELL ONE 3



Driver: "The old skates are running away. Keep your eye on that dynamite in the back of the wagon an' see that we don't lose any of it."

The Reason

A COLORED agent was summoned before the insurance commission.
"Don't you know that you can't sell life insur-

ance without a state license?"
"Boss," said the darky, "you suah said a m sufful. I knowed I couldn't sell it, but Ah



The Wrong Kind

WE also have some nice horseradish today," the grocer was explaining to the new bride out on her first shopping trip.
"Oh, but we keep a car," she explained sweetly.

The Obvious Course

SMITH: "Just got a letter from my wife saying she's nervous with me away—all unstrung, you know."

BROWN entertains a good opinion of himself." Well, that's all right; his good opinion of himself entertains Brown."

nes: "What are you going to do?"



Inevitable Now

I'VE had a terrible premonition of approaching death."

"Yes; I bought one of these lifetime fountain pens, and it's broken."

HOW fast will your car go?"
I really don't know. I'll ask my son, when he comes home some time."

Reciprocal



1. LETTER DROPPING

The ********* news was told to me As I was ******** for the sea. I stood there, ******* at the sky Until the ****** of ships went by. At last I knew that truth could *****. No more could I rejoice and ****. The *** that brought this tragedy Belonged, ** part, * knew, to me.

Each star represents a letter; drop a letter from the first word to give the second, from the second to give the third, and so on.

2. WORD OBLONG

Across: Certain rulers. Second • • • • • row, all one letter. Stuck in the mud. • • • •

Down: Headgear. A capuchin monkey. A Swiss river. A girl's name. Forlorn.

3. A RIDDLE

There is a certain word in which I may be seen five mes; yet if I possess it, I cannot be seen at all.

4. BEHEADINGS

By removing the first letter of the words defined below, the required changes are made. Example: Desire becomes an insect. Want, Ant.

A narrow channel becomes a characteristic.
A nail becomes a fish.
A street becomes a place where a crime was com

ed. onder becomes ourselves. cape becomes something luminou am becomes a flat utensil. rike becomes a very small thing.

1. A letter. 2. A bag. 3. To spread around. 4. A German industrialist. 5. A flower. 6. Is concen-

6. MISSING WORDS

When war arose, the soldiers ****
Their foemen forth; for they were ****
In days to come, when times are ****
Such warriors again you'll ****
The four missing words differ only in the fir letter of each.

7. BLOCKED CENTER-SQUARE

r is missing.
A lifting device. 2. A Roman
al. 3. Roman numbers. 4. To
over. 5. Carousal.

8. MYTHOLOGY

The star and the dot stand each for one certain ter. Fill them in, and learn what a believer in citent mythology would say today in honor of an syptian deity.

9. A PUZZLING FAMILY

man had three brothers. Each of his brother three sons; each son had three sisters; each sister three daughters; and each daughter had three hers. How many relatives did the man have?

10. WORD-RHOMBOID

ANSWERS TO JULY PUZZLES

How your Voice Crosses the Ocean

C A Bell System Advertisement

TREEPHONING across the Atlantic ocean is one of the wonders of the world today. It is marvelous to think that the people of two continents can talk with one another. But even more amazing is how this is made possible. There are several different steps in the setting up of a transatlantic telephone connection. Your voice, spoken into your telephone transmitter, is first carried over regular telephone wires to New York City—so far, no different from any long distance call.

In New York, your voice is carried into the long distance office and strengthened by a vacuum tube amplifier which keeps the voice currents always at the right strength.

currents always at the right strength.
From the long distance office your voice is sent out—still over telephone lines—to a radio transmitter station on Long Island. In the radio sent out—still over telephone lines—to a radio transmitter station on Long Island. In the radio transmitter the voice currents are again strengthened, enormously more than before, and changed into radio waves. These waves are then broadcast from the tall transmitting towers with enough power back of them to send them across the ocean. At this stage the electrical energy used to carry the voice currents is powerful enough to light several hundred homes brilliantly.

When your voice is next heard from it is being caught by a radio receiving station in Scotland. From there it travels down to London over special telephone lines. When it reaches the London telephone office, it is sent over ordinary telephone circuits to the receiver at the ear of the listener.

The answering voice in returning to the United States is broadcast from a radio transmitter in England to a receiving station at Houlton, Maine. Special telephone circuits carry it to New York, and thence over the regular telephone system back to you.

This sounds like a long trip, but it all happens in a very small fraction of a second. It is hard to realize that the voice you hear has actually come across the ocean.

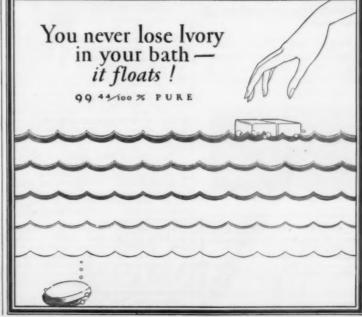
Telephone service is now available between

actually come across the ocean.

Telephone service is now available between the United States and Cuba, Canada, Mexico, Great Britain, France, Germany, Holland, Switzerland and most of the other countries of Europe.









Meet "Fish" Merrill

"Fish" Merrill's team is sure of another point that look of determination on his face means something. The finish of the race is bound to show "Fish" out in front. He doesn't carry that nickname for nothing!

If you ask him how he does it. he smiles and says "lots of practice and keeping in good condition." That means keeping healthy . . . and nothing helps like cleanliness.

Cleanliness starts with the teeth, says "Fish," so he cleans his teeth as his coach advises-with Colgate's. Delicious and peppy, Colgate's bursts into a racing foam the moment it's brushed on teeth. This active foam rushes through the mouth, sweeping away all impurities-sweetening all surfaces-brightening, whitening the teeth ... pepping up the gums ... making the mouth feel healthy-and zowie! How clean!

Take a tip from "Fish" . . . use Colgate's ... you'll say it's great! Try a tube on our say-so. We'll pay for it. Just mail the coupon.



Try Colgate's one week-FREE COLGATE, Dept. B-1827, 595 Fifth Avenue New York, N. Y. In Canada address Colgate, Toronto 8, Ontario Please send me, Free, a generous trial tube of Colgate's—the dentifrice coaches advise. Nan

Address

THE WORM TURNS—AND CLIMBS

[CONTINUED FROM PAGE 429]

school and was going to work in the fall. But right now he was going to Avondale, in the western part of the state, to take a job for the rest of the summer. I tried to find out what the job was, but he was pretty vague, and as Avondale's a big corton-manufacturing town I guessed he was going to work in one of the mills.

In August I got a postcard from him with a picture of the Avondale Mills Company's plant on it. He wrote: "Having a fine time here. Played Malcolm Knowlton yesterday and got a set. Regards to the fellows. Lester."

I showed the card at the club, and Jim Wilson, who was there said, "No reason why he shouldn't play with Knowlton, Bud. Mal lives in Avondale. Has some sort of a job at the mills. His father owns them." school and was going to work in the fall. But

mills. His father owns them."
"Well," I said, "even so, how about his getting a set from him? That sound all right,

Jim smiled. "Guess that's poetic license or

Jim smiled. "Guess that's poetic ricesse or something."
"Or just plain lying," sneered Joe Warden. I went away with the family the middle of the month. Usually we get home the first of October, but that time Dad got a bad cold out fishing in a rain and was pretty sick for a couple of weeks, and so we stayed until the fourteenth. The second day I was home I packed up my sensit sthings and took them back to the club. It tennis things and took them back to the club. It was forenoon, and only a few folks were about; four or five juniors I didn't know and some girls. So I put my things in the locker and then wan-dered over to the board and looked at the ladder. Of course Jim Wilson was still No. 1 and Frye No. 2 and Lumis 3. Fellows were away so much in the summer that there wasn't much challenging. And I was still No. 8. But then my eyes popped, for opposite 6 I read "L. H. Drew" I looked to the bottom of the column, and Lester's

looked to the bottom of the column, and Lester's name was gone.

I got the full dope from Billy Keep a few minutes later while we were changing in the locker room. It seemed that Lester had showed up a couple of weeks ago, looking extremely fit, and had posted his first challenge, to a fellow named Morris, who was No. 14 on the ladder. Keep said he didn't see the match, but understood that Lester had won easily in straight sets. "In fact," Billy added, "he's won all his matches the same way. I saw him play McLone, and Mac didn't have a look-in after Lester had run down a three-game lead in the first set. He beat Mac 6-4, 6-4."

"B—but what's happened to him?" I gasped.

B-but what's happened to him?" I gasped.

"Someone been feeding him raw meat?"
"Raw tennis balls, I guess," said Billy. "Near as I can make out he's been doing nothing but

play tennis all summer."
"Why, I thought he had a job of work at Avondale."

Avondale."
"Sure. He was tennis instructor there. Knowlton got him the job. They have three or four
thousand operatives at Avondale, and a playground as big as all outdoors, Lester says. Fourteen courts, my boy! Lester's job was to teach
the lads and lassies how to play the game. And
sometimes Knowlton helped him. He says he
and Knowlton had some fine matches."
"Well, I'll be aced! What do you know? Then
that's what he and Mal Knowlton were talking
about that day! And he can play tennis, can he?"

"If you think he can't," answered Billy grimly, "take him on! But, whatever you do, don't fail to be here Saturday afternoon."

don't fail to be nete saturday assistance
"What's coming off?"
"Didn't you see it on the board? Lester's
challenged Joe Warden, and they're going to

play at four o'clock.' Oh, sweet spirits of niter," I breathed, "I'll

And I was. But I had a talk with Lester be-And I was. But I mad a talk with Lecture to fore Saturday and got the low-down. It seemed that he was wrong, the time he and Joe played their exhibition match, about Mal Knowlton not being there. He was sitting with some friends in the stand and saw the whole performance. And a couple of days later he ran across Lester and most exhibite with him. Asked a lot of And a couple of days later he ran across Lester and got to talking with him. Asked a lot of questions, said Lester showed possibilities of good tennis and ended up by asking him how he would like to spend the summer in Avondale as instructor at the company's athletic field. Lester jumped at the chance. He said he was sort of scared at the start, but aside from half a dozen of the office force the folks were pretty green at the game, and he got along fine. Usually on the game, and he got along fine. Usually on Saturday afternoons, if he was at home, Knowl-ton would come over and play, and two or three times Lester went up to the Knowlton residence ton would come o times Lester went and played there.

and played there.

He was some taller than when I'd last seen him—or maybe he just looked taller—and a lot thinner. In fact there wasn't much flesh on him. But he looked as hard as nails and full of v, h and e; which, in case you don't know, is vim, health and energy. He said he hoped I'd come out and see his match with Joe Warden, and I said I hoped there'd be air in the atmosphere, and asked him if he thought he could beat Joe and get No. 4 position.

and get No. 4 position.

"Well, there's nothing certain about it, Bud," he answered, "but I'm a lot better than when I played him last, and I don't believe he's improved much during the summer. And then, too," he added sort of half to himself, "it means with a lot or but." quite a lot to me!

WAS certainly surprised on Saturday to see what a crowd had gathered. Naturally all what a crowd had gathered. Naturally all the members were there, or mighty near all, and a lot of them had brought friends, but they didn't account for about sixty or seventy folks in the public stand. They didn't look like the sort that usually came to the tournaments; weren't so dressy and didn't talk so loud. Then I saw Lester's father—we got our hardware at his store, and so I knew him by sight—and a woman with him who was probably his wife and two girls and a small boy who was the image of Lester and, further along but belonging to the party, an elderly man and woman and two more girls. I got wise then. That was Lester's crowd in the public stand, his folks and their friends and the friends' friends. Gee, if we had charged admission that day we could have made a nice little pile!

ally in a ladder match we don't bother about an umpire, but today's match seemed more important somehow, and when neither Lester nor Joe objected Jim Wilson took over the job. It could see that Joe wasn't feeling any too confident; the way he netted shots when they were warming up proved that, and, besides, he wasn't

making any funny cracks. He won the toss, chose to serve, and the match began.

Joe was a right nice player of the hard-hitting, smashing type and could go like a streak when things were coming his way, and could play awfully rotten sometimes when they weren't. This afternoon he started off handsomely, taking the first game on his serve and the next on Lester's. But it looked to me as if Lester was sort of letting him get away with points that he needn't have and that he was studying Joe instead of playing back. And I guess he was, too, for he broke through Joe's next service and took the game, losing only two points. and then he showed what he could do, and, boy, it was plenty! He had a serve that was like a shot, landed close to the left corner of the service court on Joe's backhand and then didn't bounce for a hang. He aced Joe twice in that fourth game, and Joe didn't like that a bit; and, more than that, Joe' didn't like Lester's calling "Ah, hard luck!" or "Were you quite ready?"

Well, to cut a short match shorter. Lester took

like Lester's calling "Ah, hard luck!" or "Were you quite ready?"
Well, to cut a short match shorter, Lester took the first set at 6—3, with the friendly gang on the public stand applauding every time he made a point—or they thought he did, I guess they weren't what you might call conversant with the game. And Joe made the mistake of losing his temper. Believe me, you can't do that and win. Not in tennis. He served two doubles in the last game and got only one point. They passed close to me when they changed courts to start the second set, and I heard Joe say in a pretty ugly way, "Say, quit shooting off your mouth, kid. You're just doing it to get my goat!" And Lester answered, mighty meek and obliging, "Why, sure, Joe. Whatever you say." Joe managed to get hold of himself again and, after losing the first game, took the second. He had his high-bounding serve going nicely once more, and Lester couldn't handle it so well, and the games alternated to 4—all. But then the kid started in to also real tennis. Oh he had

the games alternated to 4—all. I kid started in to play real tennis.

the games alternated to 4—all. But then the kid started in to play real tennis. Oh, he had been going nicely enough before, but when he broke through Joe's service in the ninth game and ran away with the next, taking set and match, he certainly got a hand!

Joe acted pretty decent; shook hands and said the usual blah and beat it for the showers. Jim Wilson thumped Lester on the back and said, "Boy, you played! And now I suppose it will be me pretty soon." And Lester answered, "No, Jim, I'm not good enough for you yet. Anyway, fourth place'll do me for a while."

When I got to thinking about that match afterwards there was one thing that puzzled me a heap, and the next time I met Lester I put it up to him. "Look here," I said, "I can understand you wanting to beat Joe, but—well, hang it, kid, somehow it didn't seem like you. Why, you used to be the easiest sort of a mark! Goodnatured, I mean, and—and—"

"Oh, it wasn't my idea," said Lester. "It was Knowlton's. You see, Bud, he saw what yoe did to me that day, and he didn't like it. So nothing would do but I must come back and beat him like he'd beat me, with an audience and everything. I wasn't awfully keen about it; Joe's not such a bad sort; but Knowlton kind of set his heart on it, and he's been awfully fine to me, and so—"

"Yeah," I said, "I know. You want to

on it, and he's been awfully fine to me, and so—"Yeah," I said, "I know. You want to

another breakfast and foolishly making plans to go horseback riding with Connie Meadows. That would cost him one dollar,

and he would have only fifty-one cents left! He was just about at the end of his rope. It was a delightful ride through the forest that he had with Connie that morning. She had talked approvingly of him and his work. She had, indeed, confessed that she really had begun to think when he first came that he was just an ordinary clerk or something like the other boys. But now she knew that he was

other boys. But now she knew that he different.

"Yeh," grinned Speed, guiltily, "I reckon I am different, all right." And he proceeded to get rid of her without having to buy anything at the soda fountain. And when he was alone, he continued to think along the line that Connie had been talking. He was different, no doubt about that. And he was going to be even more different in another day.

more different in another day.

He was decidedly meditative as he held up the bottle of Cherry-Pep. Gosh! It tasted good. It seemed to typify the whole idea of a seemed west-on. But it was just about his constant. good. It seemed to typity the whole idea of a real vacation. But it was just about his last bit of enjoyment. He noted the label, a striking bit of color printing, with much red and orange and blue. Made in Muskegon, it said. And then there was a slogan:

"After a Good Time—Cherry-Pep!"

Speed read that slogan several times. Yes,

MONEY TO SPEND

[CONTINUED FROM PAGE 441]

sir, it was a good one. He had always thought of them as nice phrases to fill in white space, something to go underneath a smart illustration.

But now—
"I surely am doing just what that thing says,"
he thought. "I reckon there isn't a better way
to spend my last dime. When I finish getting
rid of thirty-nine cents more I'll come back here
and have another glass of this." Then his face
brightened. "Gee! That would make a dandy
ad!"

And right then and there the solution of Speed's problem flashed into his hungry mind. He didn't even wait for dinner, but was out of the hotel and on a run toward the village. He the note and on a run roward the vinage. He was the go-getter himself now, on the trail of an order. Half an hour later he was standing at the writing shelf in the local telegraph office, drafting a message to the Cherry-Pep company. And as he wrote, his face glowed with the light of success. He knew he had the solution—he knew

bottle of Cherry-Pep with it. I'm on my vacation, and stone broke. Use this for an ad and send me by wire whatever it's worth to you. I'm waiting here at the telegraph office. Edwin Kane."

And in half an hour there came clicking over the wire to him the sum of ten dollars!

THAT evening, when Speed and Connie were sitting out a dance, Speed was silent for a long time. The world was wonderfully good. He just wanted to sit and enjoy it. A man can't talk when he feels that way.

"You must be thinking about some big ads you're going to write," said Connie, inquiringly. "Where do you get all your ideas?"

Then Speed came to. He turned to her with a smile. "Oh, it's easy. Remember, when I first came, how you folks kidded me about being brooke? Well, that gave me an idea. This morning I wrote an ad and sold it to the Cherry-Pep people. It was about how I was broke and on a vacation and spent my last dime for a bottle of Cherry-Pep. Maybe you'll see it when it comes out in the papers.

"I think you're awfully clever," said Connie. "And to think that we silly people really believed you were broke. Hah-hah!"

"Yes," said Speed, cheerfully. "It was a good joke, wasn't it?"

RANDOLPH—SECRET AGENT

only such polite and innocuous questions as one traveler might normally ask another. How long did he intend to stay? Had he booked passage home? Had he heard of the new opera at the capital? When he received their soft buenus noches he went to his cabin, glad he had made so pleasant an acquaintance; a pretry girl made so pleasant an acquaintance; a pretty girl on a ship that will sail under a tropic moon is

on a ship that will sail under a tropic moon is an asset to any sea voyage!

For three days sea life was uneventful. Early rising, a brisk salt-water bath, for which Nogi, the little Japanese steward in charge of his room, called him exactly at six bells, a quick two miles around the deck before breakfast, two more afterwards, deck games, reading, watching card games in the smoking-room, an informal concert in the evening,—Señorita Estevan played and sang charmingly—a short moonconcert in the evening,—Señorita Estevan played and sang charmingly,—a short moon-light walk with the one good hand confidingly on his arm—it was all very pleasant.

THE evening of the third day three of the four electric lights in Mark's cabin did not respond. He pressed the button for Nogi. When the Oriental appeared, Mark spoke in halting Japanese, on the spur of the moment. "Dento-tada kori nomi!" (Lighting lamp—this one only!) He pointed at the single bulb which burned dimly.

"Dento—rada kori nomi!" (Lighting lamp—this one only!) He pointed at the single bulb which burned dimly.

A torrent of soft Japanese answered him. Nogi was evidently hungry for his native tongue. But Mark held up a protesting hand. "I don't speak it, Nogi—just a few words. Lived in Japan a year. Fix the light, will you?" "Can do!" responded Nogi, and did.

The next day came a small adventure. Mark was reading in his deck chair; the chair next to him, usually occupied by Sefior Estevan, was vacant, its rugs tumbled, a book and papers care-lessly thrown down. Nogi passed by, smiling at his cabin passenger. Suddenly he stopped, stooped and picked up a pocketbook.

"You know he belong who?"

Mark looked at the initials in gold: R. H. E. "The Sefior Estevan, I think. There he is—"He gestured at the Guayzillian leaning over the rail, talking to the purser, perhaps thirty feet away. The conversation appeared intimate—at least it was in low tones. Nogi bowed, and pattered down the deck. Mark saw him silently proffer the book to its owner.

Sefior Estevan snatched it and burst into a tirade of angry Spanish. Hardly had he paused when the purser took up the words. Mark

Señor Estevan snatched it and burst into a tirade of angry Spanish. Hardly had he paused when the purser took up the words. Mark could see no cause for that official's apparent heat. Nogi stood quiet, his face blank; evidently he did not understand. But Mark had caught a word from the slightly raised voices. "Why, he isn't a thief!" he cried indignantly and got up quickly to join them.

Other passengers collected, attracted by the sound of excited speech.

Mark pushed his way to the center of the group. "You are mistaken, Señor Estevan," he stated clearly. "I saw Nogi pick up your pocketbook from the deck. He asked me if I knew to whom it belonged. I saw your initials, so I pointed you out to him. He went directly to you. He did not steal the book and could not have taken anything from it."

Señor Estevan looked nonplussed. Then, "You examined my pocketbook?" The words were passionless, but Mark read a menace in the words.

"Certainly not! As Nogi held it up it opened."

words.

"Certainly not! As Nogi held it up it opened; your initials are plain. No one has touched your property, Señor Estevan!"

"I—I am sorry. I—have made a mistake. Here, you—" to Nogi. He proffered a coin. But Nogi backed away, smiling.

"No can do! Much happy return Mister book!" And off he trotted.

Mark thought no more of the incident. In the evening a knock on his cabin door disclosed Nogi with hot water. After pouring it into the pitcher he turned to his cabin passenger.

"Nogi large oblige! Dark man no like Nogi; make him not agreeable. Mister say Nogi not steal. Nogi hands your hands between. Nogi your man!"

"Why, Nogi, that wasn't anything!"

your man!"
"Why, Nogi, that wasn't anything!"
"Nogi think great much!"
"Well, friends never hurt!" thought Mark.
"And an Oriental is as good a friend as he is bad an enemy. But why was Estevan so perturbed? What was in his pocketbook that would have caused him distress if I had seen it?"
An unanswerable question then; some hours later Mark could wess.

An unanswerable question then; some hours later Mark could guess.

It was nearly midnight of the following day. Mark grew tired of watching the cardplaying in the smoking-room. He refused all invitations to play himself; long ago his father had taught him that to play cards with strangers was to invite disaster. He didn't feel like reading, and he had had all the air and walking he

wanted. Yet he rather hated to go to bed; the tropical stars are very beautiful, and there was always the possibility that Señorita Estevan would tire of other conquests and elect to walk with him. But tonight he had not seen her on deck. The cabin, whence came faint sounds of music, mingling with the steady thud-thud of the screw, was too warm, even with Señorita Estevan in some bewildering new costume as an

attraction.

He left the smoking-room by the starboard door to walk to the bow end of the main deck. Climbing the ladder-like steps to the upper deck, he stook, looking down. Two strolling figures in the port alley stoopped just beneath him, whispering. The syllables were in soft Spanish, a woman's voice.

"I am so tired of my arm in a bandage!"
"Hush! You don't know where he is!"
"He's in the smoking-room—I saw him as we

"Isn't your hand nearly well?"
"Look and see!"
Mark looked, also; in the flare of a match he aw the bandage slide off, and a left forefinger eld up for inspection.
"Oh, he'll never notice that—take it off!

When are you going to start letting him pay more attention to you?"
"Brother, he's so nice! He's our own kind.
Must ??"

Must I? The answer was inaudible; the figures passed slowly around and out of sight.

Mark stood long in amazed thought. The Señorita Estevan's wrist was not sprained. It was a finger that was hurt. 'He'll never notice that.' What wouldn't who notice? 'When are the stood of the

you going to start letting him pay more atten-tion to you?" Who was be?

It made no sense. But it roubled his dreams.

The queer conversation was with him as he shaved and bathed and dressed in the morning. He made no personal application of the words as his mind roved over his shipmates for a possible clue—and found none.

At breakfast Señorita Estevan wore no band-age. "See!" she announced. "It is well enough— I have two hands! I cut my own meat!" It was I have two hands! I cut my own meat? It was the left hand that had been in a bandage. There were several rings on it, now. And then Mark misswallowed and all but choked; but he forced the food down, iron faced, staring at his plate. On the forefinger of a small left hand was a little red scar—the same sort and shape of a scar as a certain small wound from which he had drawn a splitter.

splinter.

Mark excused himself. He trod the deck
apidly. It couldn't be! That dirty little urchin Mark excused himself. He trou the ucear rapidly. It couldn't be! That dirty little urchin Señorita Estevan? Surely not! Why, the boy was half her size! Memories of college theatri-cals came to him; they always chose the smallest men to play girls' parts because even short skirts made them look bigger. Then boys' clothes should make a girl look smaller. The urchin and Señorita Estevan both had dark hair. And "Caramba—cranberries!" Then if "he" were himself, he might expect to receive advances from the señorita. If she were

to receive advances from the señorita. If she the small boy with the splinter, Mark had been followed! And Señor Estevan was not a Guayzilian, but a Natrian! If a Natriam passport win his pocketbook, no wonder be was afraid Mark had

It all fitted! Yet there was not a shred of evidence except a tiny mark on a finger and a haunting sense of familiarity. Intangible though the proof was, it seemed conclusive to Mark. "Forewarned, forearmed!" he said to himself.

AFTER all, what could they do? He was on a ship, not in a dark street! There would be no assault, theft, getaway, here! The papers were on his person: in the money belt. He took it off only to bathe, and then hung it on a hook before his eyes as he sloshed in the cold water. The dummy document was in his coat pocket. Maybe now was the time to use it—should he conceal it in his baggaage? Or on his person, and put the real document in his baggaage? Or in the purser's safe? That was too great a risk; supputser's safe? That was too great a risk; suppose the purser were a Natrian patriot and Señor Estevan had power or money—the purser might give over Mark's packet! The captain? Natrian to the finger tips!

"You weren't sent on this job to hand those

"You weren't sent on this job to hand those papers to someone else to keep!" he admonished himself. "They stay right where they are..."

The duplicate set he concealed carefully in the lining of his grip; he hoped the slit through which he pushed them was not too obvious and then wondered if it was obvious enough! Just what good it might do to have the Señor and Señorita Estevan steal the duplicate letter he did not know, but if papers were to be stolen he preferred them to be the dummy!

[CONTINUED ON PAGE 458]

[CONTINUED ON PAGE 458]

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"And I don't see how they can, unless they knock me out! At any rate, surely they won't try until we are within a few hours of landing." A very thoughtful Mark lay long awake. Part of his wakefulness was the result of a mental argument to the effect that a girl could be a perfectly nice girl even if she was a Natrian, and that just because a Natrian was, politically at least, his antagonist, or perhaps even his enemy, least, his antagonist, or perhaps even his enemy, didn't mean that she wasn't a lady, entitled to

respect and consideration.

"Even if she was the urchin—oh, even if she was the burglar," Mark assured himself, "she might still be actuated by the purest and most

patriotic motives."

But Mark didn't deceive himself into thinkng that, because she might be "nice," therefore
er activities, and those of her brother, as far as his message was concerned, need not be watched "All the more reason for my remembering what I am and what I have to do. More than one soldier has been undone by putting too much faith in a woman." And Mark had no thought that this remark might have been made with a

that this remark might have been made with a smile. He was very serious.

When he finally slept, it was to dream uneasily—dreams constantly interrupted by a wakeful glance at the shuttered but open window of his cabin. So easy to break into—would they try burglary? Surely not—yet a grim and ghostlike patch of darkness had stolen through a door that was locked, moved across a hotei room floor and reached for the pocket of a coat for papers. They would not stop at burglary here, either.

"I wish I had a gun-" thought Mark for the

CHAPTER SIX

Robbed!

POR a day Mark lived in an atmosphere of fear, plots, potential assaults, a burglary of his room. He remained constantly with his fellow passengers; he made excuses for not walking the deck in the soft moonlight with his charming companion; a hundred times he put his hand on the lump which was the papers in his money belt. noney belt.

money belt.

Soberly he began to take himself to task; so far it had been a grand adventure, almost a comic opera in which he played a leading rôle: plots, espionage, dictograph, burglary and reburglary attempted, apies, dummy papers; but the sudden realization that his mission was important enough to cause a girl he knew to be a lady, refined, educated, to disguise herself as a street urchin made him believe that perhaps those who would intercept his documents would not stop at legal or peaceful methods when once not stop at legal or peaceful methods when once he was in what he already thought of as "the enemy's country." A dozen times he told himself it was impossible—Señorita Estevan could not have done such a thing. And a dozen times that finger arose before his face and convinced him that she had.

him that she had.

But after twenty-four hours Mark began to find a queer enjoyment in the situation. He thought it through, over and over again, until convinced he knew the sequence of events. Someone from the House with the Blue Door convinced he knew the sequence of events. Someone from the House with the Blue Door must have traced him to the Washington Hotel; perhaps he had perched on the spare tire of the police carl. Then he had been followed to New York—the vaguely familiar face which looked into his taxi as he rode from the station to the Spottiswood came back to him. Someone must have been on his heels everywhere in New York; the clever little urchin with the dirty face for choice! Why "he" had spoken to him on the dock Mark did not know; perhaps to indulge a love of excitement. And he, poor boob, had asked for Cleo! He might as well have broadcast to all Natrian patriots that he was on his way to Guayzil with a secret message!

But why had they tried to rob him in the hotel? Why had they not waited until he was on Cleo? Or in Natria? Why make the attempt in New York? Was it because they thought is safer; or was time important? If time was vital, why had not another attempt been made on

why had not another attempt been made on Cleo? Perhaps they didn't dare trust radio and so would wait until almost to Natria—or even after he arrived in that country.

Mark searched the Señorita Estevan's pretty

Mark searched the Schorita Estevan's pretty face as closely as he could without seeming to stare. It was impossible; this lovely girl could not have been that dirty small boy! But as he weighed and considered her height, her general appearance, her hair, and above all that slightly appearance, her hair, and above all that stightly scarred forefinger, conviction became certainty. There was no clue in her voice, save for one word. "He" had been a very hoarse-voiced newsboy except for that one sibilant "Caramba!" Clever of "him" to say "cranberries" the next moment, particularly with "his" blank stare as the only answer to his Spanish question.

RANDOLPH—SECRET AGENT

CONTINUED FROM PAGE 457]

This scheduled love-making, now; why? Mark was puzzled as to how a Natriari conspirator would find it of value in a putative robbery. Day followed eventless day and night succeeded watchful night. The Southern Cross rose majestically higher above the horizon with each twenty-four hours. Friendly stars disappeared over the stern; new constellations gleamed in unfamiliar skies. Daily the water grew bluer, the temperature higher, the air balmier. The thinnest of linen and silk became common costumes. By imperceptible degrees Señorita Estevan daily spent more and more time with Mark; van daily spent more and more time with Mark; her brother less and less. It was Marquet and Carlotta now. Although convinced she was a spy, Mark had none of the common feeling that a spy, Mark had none of the common feeling that a spy was contemptible. Long listening to tale of spies in the Civil War and many an explanation from his father had taught him that the spy who serves his country is worthy of all praise and honor, no matter how disgraceful the death he may have to die at the hand of the enemy if caught. If Carlotta and her brother were spies, doubtless they were so for the purest and most patriotic of motives. In spite of the belief that she might stick a knife into him if necessary to get his papers, Mark yet found the association very pleasant. She was well educated, had traveled much, was gay, lighthearted, good company, and if her liking for him was not genuine he found it a marvelous counterfeit.

Had suspicion not dictated his every move,

Had suspicion not dictated his every move, Had suspicion not dictated his every move, Mark would have thrown himself whole-heartedly into what soon became frankly a flirtation. She sought his company. All his walks were now with her. She read his books and he read hers, often aloud to each other. They danced together; he turned the pages of her music when she sang. Her dark eyes lit with interest at his approach. She demanded tale after tale of his life, his travels, his studies, his athletics. Mark was no braggart and did himself less than justice, but she soon convinced herself—or seemed to—that he was a champion berself—or seemed to—that he was a champion boxer and wrestler. "My brother, he is also the box-fighter," she said to explain her interest. Mark did not mention his knowledge of jinijissu or jindo. Often he took himself to task lest he believe she was really interested in him as a

man, not as a messenger!
She asked no question which could hint of any interest in his mission; apparently she was convinced that he was a Guayzilian returning

convinced that he was a Guayzilian returning after many years to visit his native land. But when Mark steered the conversation to politics in general and Guayzilian-Natrian diplomacy in particular, she was little interested and the subject was soon changed.

"Oh, these politics!" She made a little mouth. "They bore me! The dance, the gayety, the good time—for what is youth but that, Señor Marquet! Come, you shall walk me to the stern and point to me the great and beautiful new stars of our country—so!" and she cuddled in the crook of his arm. the crook of his arm

It could not go on forever, he thought grimly as Cleo approached the Equator. They drew daily nearer to Natria. She must show her

Notices appeared on the bulletin board.
Neptune would come aboard at the crossing. The sailors were preparing their strange ceremony for such of their members as were "crossing the line" for the first time. All passengers were invited. Then Señor Estevan proposed an entertainment for and by the passengers: foot races, wrestling matches, deck rames a boxing contest.

games, a boxing contest.

"You will wear my colors, will you not, my Marquet?" begged Carlotta.

"Certainly I will!" assured Mark. "But what do you want me to do? I'm such a ham at shuffleboard—"

at shuffleboard—"
"Ham—what is that, ham? The stern leg of
the pig! [But 'no! You shall make the box!
But perhaps you fear the box-fight with the
unknown antagonist?"
"Of course not!" Mark was scornful. He
would not have her think him afraid of

nything.

Was this the answer? Was he to box with
enor Estevan and be knocked out? "Two can

play at that game!" he exulted.
"So! Then I shall make the knot of ribbon

"So! Then I shall make the knot of ribbon for you to wear. You must win the box-fight at the crossing of the line!"

She boasted much that afternoon of "my American box-fighter." She talked of the coming games to everyone. All the passengers knew that Mark would box and wear her colors.

Not until Mark was alone that night did her cleverness penetrate his mind. It was nothing to clumsy as a knock-out which might give them time to get into his cabin. It was far more

subtle. One boxed in boxing costume: trunks, a shirt, or bathing suit. One could not wear a bulky money welc

bathing suit. One could not wear a bulky money welst while boxing in such a scanty covering. Naturally one could put one's belt in the purser's safe or give it to one's friend to hold. "Ah! So that's it! Now what will she suggest?"

But she did not suggest, and Mark honored her cleverness. Or was it cleverness? Talking to Señor Estevan, the purser had been unnecessarily harsh with Nogi; several times since Mark had seen Carlotta's brother in close conversation with the official. If she thought he would give his money belt and papers to the purser, it was merely common sense on her part not to suggest otherwise, provided his suspicion was correct and the purser's relations with Señor Estevan were patriotically intimate.

But the real problem was not what way she might suggest to keep his valuables safe while he indulged in athletic games, but what he should do. If he left his belt with the purser, he would get it back, but would the letters not be opened and read?

Mark thought of sewing the papers in the lining of his mattress; of concealing them under the little rug on his stateroom floor: of sticking

Mark thought of sewing the papers in the lining of his mattress; of concealing them under the little rug on his stateroom floor; of sticking them with chewing gum to the under side of his cabin table. He rejected each plan as soon as made. The Estevans were not criminals in the ordinary sense of the term. Doubtless their motives were as high-minded and as patriotic as his own. Señorita Estevan was obviously a lady, the Señor Estevan a polished man of the world. Any means of concealing a somewhat world. Any means of concealing a somewhat too bulky envelope Mark could think of would

too bulky envelope Mark could think of would probably be anticipated by them.

Should he change his mind and decline to take part in the games? Having agreed to do so, and after Carlotta's boasting of him as the star performer, he didn't like to back out. He had pride in his word and in appearing before his charming friend as unafraid either of the "box-fight" or anything she and her brother might do.

The solution came after he was in bed; he grinned to himself in the darkness, and went

grinned to himself in the darkness, and went peacefully to sleep. The place to hide a leaf, after all, is in a forest. To conceal a grain of sand, choose the seashore!

choose the seashore!

Promptly at six bells in the morning Nogi knocked on his door.

Instead of his usual, "Coming, Nogi!" Mark beckoned the little Japanese into his cabin.

"Nogi, you said your hands were between my hands and you were my man. Did you mean it?"

mean it?"

"Can do!" "Then wear this today!" Mark peeled his pajamas and stripped off his money belt. "I dress in shirt and trunks to take part in the line ceremonies.

Ine ceremonies."
"Purser, he put in iron box!" protested Nogi.
"Never mind the purser and his iron box.
You do this for me? There's a reason, Nogi."
"Can do!" answered the Oriental, fastening the belt around his waist.
"Good. And—Nogi! Tell no one—no one!"
"Can do!"

'Can do!

Mark felt safe. Nogi's pledge had come strangely from a servant's lips, but perhaps Nogi had not always been a servant. Mark knew that the Japanese who puts his hands between your hands and says he is your man is yours,

your hands and says he is your man is yours, body and soul.

Mark grinned again as Nogi departed. He poked at the dummy paper in the slit of his suitcase lining, pulling it up until a corner barely showed. "Ought to give my friend the thief a thrill, anyhow!" he thought.

He went quite happily to the games and contests of the crossing of the line. The Estevans could not today find the papers he had sworn to deliver. He locked the door and turned the key into the purser's office.

He enjoyed the ceremonies with a peaceful mind. He laughed heartily at the antics of Neptune, at the unlucky sailors who were "keel-

Neptune, at the unlucky sailors who were "keelhauled" and shaved with a wooden razor scrap-ing whitewash from their faces, and cheered the athletic contests. His own was a four-round boxing match, not

His own was a four-round boxing match, not with Señor Estevan, but with his table mate, Gordon, "machinery, American." Just before his event was called, Carlotta beckoned him to her side to pin to his sleeveles bathing shirt a little bunch of purple ribbon. She laid her hand on his bare arm. "Such a big muscle!" she whispered. "I feel sorry for the poor Señor Gordon."

Gordon."

Mark was pleased; conspirator or no conspirator, spy or no spy, thief or no thief, she was a very pretty girl, and many men looked enviously at the lad who had so obviously won her favor. "Thank you so much!" he answered. "Will you keep something for me?"

He did not miss the flash in her dark eyes, though her answer came promotely. "But of a

though her answer came promptly. certainty!"

Mark took off his glasses. "Can't box in these!" he explained.
"May I not keep something else—the watch, perhaps, the pocketbook? You would not like them to be scale." them to be sto

them to be stole."

Mark smiled. "My coat, if you will—here, put the glasses in the pocket!" He handed it to her, grinning to himself. No, he wouldn't like anything to be "stole"!

Mr. Gordon outweighed him by thirty pounds but protruded a comfortable "bay window." The gloves were ponderous ten-ounce pillows. Mark toyed with him, easily dodging his ponderous swings. He struck scarcely a blow during the match, contenting himself with blocking, ducking and side-stepping. In the locking, ducking and side-stepping. In the middle of the fourth round, Mr. Gordon suddenly sat down, comically, completely winded. Mark had yet to breathe hard. He did not hurry to change his clothes. "Give them all the time they want!" he thought, grimly. He had not been able to discover Señor Estevan among the spectators, although Carlotta was much in evidence.

Probably it was insciention.

much in evidence.

Probably it was imagination, but he thought she looked disappointed as she handed him his glasses and coat. Perhaps she had expected to find something else in it.

glasses and coat. Perhaps she had expected to find something else in it.

Returning to his cabin, he looked eagerly about. Apparently nothing had been disturbed. Could he have been mistaken? Was he frightened of a shadow? He pulled open his grip—looked—sighed. The dummy letter which he had revealingly concealed in the slit lining of his grip was no longer there.

MARK dressed slowly, thinking hard.
There was no possible doubt. The purser must have given his key to whoever had entered his cabin. But now the thief must know that he (or she—he could not keep his eye on Carlotta all the time he boxed) had been

eye on Carlotta all the time he boxed) had been tricked. What would their next move be? They would regret they had put him on his guard. "Why, they'll want to put the dummy back! I came too soon after all."

Mark finished dressing hurriedly. He passed swiftly around the decks until he found Señor and Señorita Estevan, the former standing, the latter sitting in a deck chair. Mark thought Señor Estevan looked at him narrowly.

"Good show, wasn't it?" asked Mark, laughing. "Glad I didn't have to be shaved with that razor! Oh, I forgot your pretty bunch of rib-

ing. "Glad I didn't have to be shaved with that razor! Oh, I forgot your pretty bunch of ribbon! I left it in my cabin!"
"Marquet, that was not very gallant!"
"Absolutely not! I'll go get it at once—and wear it next to my heart! And I forgot to lock my door, too."
"No! Sit and talk to me! No one will know your door is open." Mark caught a flashing glance to the dark man from the black eyes which looked so meaningly into his.

which looked so meaningly into his.

"Oh, all right—if you'll forgive me for not bringing the ribbon."

Mark sat. The Seflor Estevan drifted away.
Carlotta became suddenly voluble. The poor Seflor Gordon, so breathless! Marquet played with him so graceful like the cat. It was fine Señor Gordon, so breathless! Marquet played with him, so graceful, like the cat. It was fine to be strong, like that. They did not have much of the box-fight in her country—"in our country; my word, I forget!" she corrected herself. "But you have been so long in the great United States, you have learn. No, do not go, yet! I have not thanked you for carrying my colors to victory—so give we our ribbons to the toreador. Besides, I would ask you something!"
Mark looked his inquiry.

Besides, I would ask you sometiming!
Mark looked his inquiry.
"This book. It is the great Poe in Spanish.
I do not understand it." She pointed to a page.
Mark read Spanish as fluently as he talked it.
For ten minutes he explained the great mystery writer, but inside he laughed because she thought she descrived him.

she deceived him

What was so deep and dark and secret to her was so plain to him. He thought he detected a note of anxiety under her desire to detain him. note of anxiety under her desire to decain him. Quite naturally, and as if part of their conversation about "The Purloined Letter," she turned the talk to things lost. "I have lost a pin, somewhere—these stewards, you think they make the steal?" she asked.

"I hope not! Was the pin valuable?" asked

Mark

I valued it-I have look everywhere. You

"I valued it—I have look everywhere. You have lose nothing?"
"Not a thing?" assured Mark cheerfully.
"Haven't much to steal, but what little there is no one has bothered with!"

He thought she sighed and hoped he had convinced her he did not know of the theft of the dummy papers. Of course they would make another attempt. Had he discovered his loss, naturally he would be suspicious, on guard. When he finally left her and returned to his cabin, he found, as he had expected, the dummy envelope back in the slit in the grip. It had been cleverly opened; only a trace showed where a sharp knife had slit one end. To casual inspection it had not been tampered with.

"I'd like to have seen his face!" thought Mark. "But the plot thickens!" He did not call for Nogi, but waited until the servant came to him. No use advertising Nogi nduly in attendance.

s unduly in attendance.

Nogi came at eight bells in the afternoon. He nocked, stepped quickly inside the cabin, pulled p his shirt and took off the belt.

"Thanks a lot!" Mark put the belt around his

'You no look see?

"What for? Would I give it to you to keep if I thought I'd find something missing? Don't be an ass, Nogi!" Nogi bowed low. Mark was a little un-

comfortable at the doglike devotion in the slant ing eyes. He felt he had done nothing to

serve it. Late that night he walked with Carlotta for as hour. There was no longer pretense; he held her in the crook of his arm; at times she slipped a slender one around him. But his mind was less on the lady than concentrated at the ends of her pretty fingers. The little arm frankly about his waist was in much motion, but the papers, if it were the papers she sought, eluded her reach.

papers, if it were the papers she sought, cluded her reach.

She stopped him at the stern and faced him. The light was very dim; and she was very desirable. Mark kept his head with difficulty. Suddenly she drew closer; her big eyes looked into his. Hardly knowing how it happened, Mark found her in his arms.

But Mark did not lose his mental balance. He was entirely conscious that even as she tried to distract his attention her small fingers felt delicately, faintly but skillfully, for what might be around his waist; perhaps they felt for a bulge which might be the papers. If they did, they were not disappointed.

And here Mark had to hold frank and rather disagreeable converse with himself. He could not afford to become so much interested in Carlotta that he forgot his loyalty to his trust. Hungry for affection and some ties to replace those of his family which death had rudely broken, Mark found Carlotta a real tempration, which he resisted successfully only with difficulty and by sternly keeping before his mind that a "soldier puts nothing before his mind that a "soldier puts nothing before his duty." In this he was not helped by Carlotta, who made it more, rather than less, difficult for him by asking him to join them in the cabin for a good-night drink. She stopped at the smokingby asking him to join them in the cabin for a good-night drink. She stopped at the smoking-room door to call her brother, and Mark was with difficulty persuaded to have a cup of coffee. "But our journey is so soon to end; we must celebrate tonight-surely you will not

OMEWHAT to his surprise, Mark found himself less, not the more, happy for his evening. That Carlotta liked him much he was sure. But that she liked him partly because by liking him she might get opportunity to "take" (Mark no longer called it "steal") his documents was too probable to be avoided in thought. And no man likes to be liked because he research an opportunity. OMEWHAT to his surprise, Mark

cause he represents an opportunity!

On the other hand, Mark comforted himself, perhaps when his mission was accomplished, and she had failed, she might have formed the

and she had talled, she might have formed the habit of liking him so strongly that she would not be able to break it.

"Think of—well, of thinking so much of an enemy spy!" Mark smiled wryly in the darkness. "I wish she were a man—no, I don't either!" rather fercely. "But I wish—I wish—" ness. "I wish she were a man—no, I don't either!" rather fiercely. "But I wish—I wish—".

He hardly knew what he did wish, except that, whatever it was, Carlotta was in it otherwise than on the "enemy's side."

"I don't believe she'd do me an injury!" He

than on the "enemy's side."

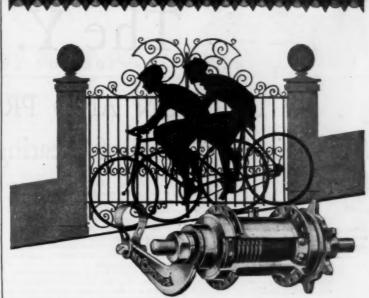
"I don't believe she'd do me an injury!" He contradicted his early thoughts of her willingness to use a knife if necessary. "She'd get the documents if she could, of course. But she wouldn't hurt me to do it, or play a mean trick, I know." He smiled a little tenderly. Carlotta was very pretty and very sweet.

Mark slept badly. He had many weird dreams. Something tugged him about the middle; he was being keelhauled, as had been the initiates of the afternoon. He was conscious of tossing around on his bunk. In the morning he woke unrefreshed, tired, his head aching. His back hurt, too. "That confounded belt! It's always lumping up under me!" Mark rose and threw open the shutter. A delicate pink dawn gilded his room. But Mark saw nothing of beauty. For as he removed his belt to change the position of the lump, something caught his attention; the lump was—different, somehow! Quickly he unbuttoned the litt'e flap. Papers were there, certainly, but—but—where were the seals? The ribbons? With trembling hands he withdrew and unfolded half a dozen sheets of blank white paper.

"The coffee!" earned Mark. "Devended and

paper.
"The coffee!" gasped Mark. "Drugged—and

The sealed envelope he had carried was gone. TO BE CONTINUED NEXT MONTH



Speed! Speed! Speed-with Safety

One of the chief pleasures of bicycling is the exhilarating speed—the swift coasting down the grades—effortless flight over level roads - but it's no fun unless you have perfect control of that speed at all times. New Departure Coaster Brakes furnish that safe, sure, retarding of motion-on eight out of ten bicycles sold-you can have it on yours for the asking. See your dealer.

NEW DEPARTURE MANUFACTURING CO., Bristol, Conn.



One of these Boys Will Fail ~ IF

Both possess equal health and intelligence, both have qualities for success—but one standars. Where the property of the proper

Bogue Institute for STAMMERERS

11817 Bogue Bldg. 1147 North Illinoi Indianapolis, Ind.

The Perfect Guide for MODEL PLANE BUILDERS!

g Broadfield Catalogue lis eded, from plans to dope tter model aeroplanes. B es build planes that fly high ther. Get your copy NOW rize-winning model plane! in stamps to

BROADFIELD AEROPLANE CO. petcad, Dept. 38, L. I., N. Y.

Ask your STOVINK



A Real Leather Cowboy's Belt

RELLOWS, here's your chance to make a real leather cowboy's belt. The kind the real rough riders of the range all wear. None of your fancy buckles for them. Just a regular strip of leather, tied with a leather thong. They tie them with a cinch knot, just like they used to secure their saddles. And when they're riding bucking broncos a slip of the saddle means serious injury or death, so you know those cinch knots do not slip. not slip.

not slip.

Think of the fun you can have, wearing a belt like that. And boy, think of the pride you will feel when you tell the other fellows you made it yourself, just like the men out on the western ranges do. We supply the strip of genuine full grain cowhide—that can't wear shabby—the thong, the rings, the needles and thread to sew it together, and full directions with diagrams showing just how to make it. Any fellow can do it and save \$1.50 by making it himself, because the complete belts ready-to-wear safe for \$2.50, while the complete outfit for making it yourself only costs \$1.00.

Be the first fellow in your gang with a real

Be the first fellow in your gang with a real rain cowhide cowboy's belt. The color is beautiful natural russet. Send us \$1.00, a cash or somey order, and we'll send you be complete outfit as shown above.

Bryan Leathercraft Company, P. O. Box 702 Philadelphia, Pa.





BERSHIP INSIGNIA, THE FIRST STEP IS TO USE

FACTURED PRODUCTS CERTIFIES TESTS MADE BY THE Y. C. LAB



INGENIOUS BOYS

FOR FUN AND PROFIT

Try This New Way of Treating Photographs

OU have often seen, in the windows of the drug and grocery stores in your neighborhood, elaborate cardboard displays advertising various products. These are usually supplied by large manufacturers, and when the shopkeeper wishes to advertise some special article of his own he is compelled to rely on a showcard or some other easily obtained device. In this article you will find not only a way to treat photographs which will make them more interesting and valuable to you, but one which will enable you to produce advertising displays which, if carefully and intelligently done, will find a ready market.

find a ready market.

Improving the Background

Look through your photograph album and notice the number of prints which are made unnotice the number of prints which are made un-interesting by the wrong kind of background. Uncle Ned, posing against a brick wall, is liable to turn out in the finished photograph too much brick wall and too little Uncle Ned. No matter how much you cut and trim the print, those bricks and the white mortar fairly shriek with contrast. Sometimes the background in a closebricks and the white mortar fairly shrick with contrast. Sometimes the background in a closeup, even if the details are inoffensive, is so out of focus that it blurs the sight. Retouching on the negative is tedious and requires a great deal of skill, but there is a way of removing the background which will eliminate all the horrors of clotheslines, brick walls, backyard impediments, and all the other things that somehow creep in and spoil the effect.

Briefly the method is this: Large clear prints

and spoil the effect.

Briefly, the method is this: Large, clear prints are made, and glued on thin wood, and the part you really want to keep is sawed out with a jigsaw. A bit of wood glued or tacked to the back of the bottom makes a standard, so that the finished work stands by itself. This all sounds every simple, and it is, but the results will give you a pleasant surprise. They are very different from the prints with which you started, for they actually stand out as if they were almost alive. Beyond this simple stunt are the possibilities of more complicated double cutouts for advertising and other displays which we will consider later.

How It Is Done

The best results, as far as people go, are usually btained with standing figures, about six inches

MEMBERSHIP COUPON

THIS is the coupon through which any boy in the world can secure for him-self the unparalleled financial, educational and scientific advantages of membership in the Y. C. Lab. Clip it and mail it to the Director today.

Y. C. LAB ELECTION COUPON

To be filled out and mailed to

THE DIRECTOR, Y. C. LAB 8 ARLINGTON STREET BOSTON, MASS.

TION GUILD FULL PARTICULARS OF ITS FINANCIAL AND SCIENTIFIC BENEFITS TO ME, TOGETHER WITH AN ELECTION BLANK TELLING ME HOW TO BECOME AN ASSOCIATE MEMBER OF THE SOCIETY.

NAME														
STREET														
TOWN						*								
STATE	1											8	1.7	19

high in the print. Most snapshots are not so big as that, and an enlargement will be required. As the background is going to be cut away, it is not necessary to bother with borders and neat edges; all we want is the figure. Good enlargements are inexpensive nowadays, and any finishing agency will turn them out for you in a few days. Enlargements are not difficult, once you understand the process, and possibly you will want to make your own.

The paper should be a dull mat finish of the hard or contrast grade. Nearly all snapshots, if they are not to turn out gray and flat, need a hard, contrasting emulsion, and the dull mat finish makes an excellent surface for coloring or

finish makes an excellent surface for coloring or

For the support, the best wood is that obtained For the support, the best wood is that obtained from cigar boxes, thin, close-grained, and usually smelling like cedar. Pull the boxes, which may be obtained from most druggists or tobacconists, apart carefully, saving the little nails, which can later be used to fasten on the standard. To get the paper off use a sharp jackknife and keep the paper moist. But be careful not to let the wood get wet, for it will warp if you do. When the paper is gone, smooth the wood's surface with sandpaper.

Now glue the picture carefully to the wood, making sure that the figure runs the same way as the grain. Thin the glue with water so that



Potraits of yourself and your rieus need more care than scenery or an mals, for a slight deviation in cuttin around the face will make a gree difference in expression. For fin work such as this, a hand coping-sails best

is best it will flow on freely; otherwise it will make lumps and ridges. Apply the glue to the back of the print and not to the wood, then place the two together and rub the print flat, placing a clean piece of paper over the surface for that purpose. A rubber roller is best, but it can be pressed down with the hand. With a piece of paper still over the face of the print to protect it, place it under a weight, such as a stack of books, and let it dry for twenty-four hours.

A foot-powered jig-saw or motor-driven freesaw makes the work of cutting out an easy task. It must be done with care, however, for the slightest deviation of the blade in cutting around

a nose of ear may cause a startling effect. Work as fine as jig- or free-saw will produce can be done with a hand-worked coping-saw, although it is much slower.

much slower.

There will be places where the arms an legs have to be cut out on the inside. The illustration at the bottom of this page shows an instance of this. The meth od is to drill a hole in the space to be cut out, through which the dis-connected saw blade is passed. The blade is then connected the piace is then connective with the frame again and the piece cut out. If a hand coping-saw is used, a vise and much care will be necessary, for the thin wood is brittle and lights to preserve the connection of the connection

wood is brittle and liable to snap.

After the figure has been cut out with the saw, go over the edges with a sharp knife and file, so that they will be beveled and the saw of the snaps and the snaps at the snaps

will be beveled and not at right-angles to the face of the print. This, you will find, takes the flat edge away and makes the figure more lifelike.

The next step is fitting a base. A piece of \$\frac{3}{2}\$-inch wood cut so that it is somewhat narrower than the width of the print at the bottom is very satisfactory. For the final finish, paint the back and edges with some neutral color, such as gray or olive-green, so that only the face of the print will be noticeable.

Making Your Camera Profitable

Waking Your Camera Profitable

Variations such as making cutout backgrounds
and adding them to the back of the base on the
first picture so that a figure in front is standing
out against a landscape or other set will give
you a wide range of effects. The possibilities
are unlimited. For your own amusement you
can combine backgrounds showing the place
where you spent your summer vacation with
cutouts of yourself, or you can use backgrounds
such as the Eiffel Tower, the Pyramids, London
Bridge, and so on. These backgrounds can
either be prints enlarged to a considerable size,
or pictures torn from magazines or touring
catalogues.

La Members who are interested in toy

theaters will find this new way of treating photographs extremely useful. An infinite number of backgrounds and actors can be produced, which will stand alone and can be moved about the stage at will. With concealed lighting and colors, some extraordinary effects can be obtained. The cutouts should, of course, be colored for this purpose, the coloring being done before the print is glued to the wood. Use Eastman photographic colors or Japanese color sheets. Ordinary water-colors are less satisfactory.

For store-window displays, colored cutouts and backgrounds, perhaps larger than the ones

Cutouts like this are easy to make. Above is the front view, showing part of the base. At left is the back, painted a neutral olive-gray so that the edges will not be notice-able. Other kinds of supports may be used if desired

For store-window displays, colored cutouts and backgrounds, perhaps larger than the ones described, and mounted, instead of on cigar-box wood, on sheets of thin wood or veneer which the nearest carpenter can supply, are used. Suppose, for instance, your local real-estate man is promoting a new development. A display can be arranged showing the landscape, in front of it a house, photographed somewhere in town, such as is to be built on the land later, and in front of that a prospective purchaser looking toward the house. Only your own ingenuity can limit the number of such displays. The principal cost will be for the enlargements, and the final result can ordinarily be sold for a fair profit. Begin to look around you now for the profit. Begin to look around you now for the possibilities of this new kind of handicraft.

The Secretary's Notes

WITH the closing of school the hundreds of contestants for the Y. C. Lab's
1929 scholarship at Massachusetts Institute
of Technology will have more time to devote to the preparation of the three projects
on which the award will be based. They
must be forwarded to the Director by August must be forwarded to the Director by August 15. No project bearing a post-mark or express-stamp later than midnight of that day will be considered. Contestants are reminded that they must show by August 1 that they are qualified to enter the Institute as freshmen in September, 1929. This is best done by submitting College Board certification, or, if you have taken the Institute's own admission examinations, by sending the Director a statement of the results. (The rapidly increasing membership of the Lab, which will number 20,000 within a few months, has led to the determination that the facilities of the society must be increased months, has led to the determination that the facilities of the society must be increased to take care of this enormous number. The Director, Board of Governors, and Councilors have concluded that this should be done, rather than create a waiting list which would prevent many thousands of boys from en-joying all the financial and educational ad-

vantages of the Lab. This decision was reached only after much study, for the plans of the Lab, as originally laid down, did not provide for such an extraordinary number of Members. In a few months the Director will announce the election of new Councilors, and of several distinguished additions to the Board of Governors. With their help the Lab will become more than ever the most helpful and profitable scientific organization to which a boy can belong. As present, members know, it is the only scientific and engineering society in existence whose membership is limited strictly to boys. (IA) year ago last month the Director announced the completion of the one hundredth Lab Test by the society's Technical Division. Since that time 25 tests have been completed, and 11 more are at present being conducted. A list of these tests, conducted under rigid scientific standards, will be printed soon. The Y. C. Lab certificate of endorsement and seal of approval, awarded on the basis of these tests, guaranter doubly the statements in the advertisements in which the seal appears. appears. SECRETARY, Y. C. Lab



Bob! Bob!

Steady now! In a moment it will go under. Then for action!

With reel well oiled and line pre-served with 3-in-One, you're sure to land the big ones, no matter how hard they fight.

is also great for guns, air rifles, bi-cycles, roller skates, tools. Pen-etrates quickly; oils perfectly. Rub-bed on metal parts, 3-in-One pre-vents rust and tarnish. Polishes beautifully, paint, enamel, wood.

3-in-One is an oil compound—different—better than ordinary oils. In two size Handy Cans and three size bottles at all good hardware, drug, grocery and general stores.

Manufactured since 1894 THREE-IN-ONE OIL COMPANY
130 William St. New York, N. Y.





Thirteen easy-boring, clean-cutting Russell Jennings beauties . . . in Russell Jennings beauties . . . in sizes by sixteenths from ¼ inch to

In a good-looking, durable canvas case that rolls up and ties. Or in a special cabinet-maker's three-section hardwood box.

Made by the

ussell Gennings MANUFACTURING COMPANY

se bits have been the choice of skilled professional as well as ama-teur for three-quarters of a century. Look for the name on the round the mark of the genuine.

With Russell Jennings bits you can bore through the hardest woods "in high.

Ask your hardware dealer.

RUSSELL JENNINGS MFG. CO.



and the ribs of reed, covered with thin strips of veneer pro-

strips of veneer pro-tected by water-proofed linen. The completed model weighs 3½ pounds. (IA unique clock with an ingenious electric alarm at-tachment, pictured in Illustration 6, is the project of Mem-

in Illustration 6, is the project of Mem-ber Christian Han-

BURGER (15) of Long Island City, N. Y.

T THE Y. C. LAB

The Honors List for August

Ten ingenious Members of the Y. C. Lab receive cash awards and international recognition for their projects

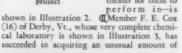
IN the construc-In the construction of his project, which you see in Illustration 1, Member W. C. Brall (13) of Bunkie, La., has utilized an unusual variety of parts. The clockwork from an old eight-day clock, the governor clock, the governor



1: Member Beall's project

from a worn-out
phonograph, parts from an Erector set, spools
and dowels and other odds and ends went into
the building of his model pile driver. The
operating machinery is controlled by levers at
the operator's stand, and the hoisting drum
for the hammer is equipped with clutch and
brake in the same manner as in a real pile driver.
(Il Marionettes, among the most ancient of toys,
have retained to this day their popularity both
with adults and
with young people.

with young people. Many Lab Members have devoted their attention to them, and have produced unusually fine examples. Among them is Member CHARLES W. Topb (11) of Hutchinson, Minn., whose project—mari-onettes and a theater for them to perform in—is. attention to them



3: Member Cox's project

2: Member Todd's



project the does not explain how the ship came to be wrecked if the are interesting and well made, the lighthouse being equipped with an electric light. QLA Ford steering wheel, a piece of 3/2-inch pipe and a few electrical fittings were combined by Member 14. fittings were combined by Member HAROLD B. by Member Harold B. THOMPSON (15) of Crawfordsville, Ind., to form the floor lamp in Illustration 8. The steering wheel makes an excellent base. ¶A complicated 3½-story thirty-room martin house which took two months to build is the as Member Cox's project
equipment. It includes a pair of chemical balances constructed by Member Cox, a lead-lined sink and over 150 different chemicals and reagents.

(A professor of bacteriology told Member Wilder F. Colb (15) of Philadelphia, Miss., that microphotography was possible only with complicated and expensive equipment. Member Cole's project of the cole's project of the cole's project of the cole of these is reproduced. It shows the tiny cellular structure of a bit of plant tissue.

(In Illustration 5, Member Stuar Rothman (16), St. Paul, Minn., is shown holding his 6/2-foot' model cance. The frame is made of white fir and the ribs of reed, covered with thin

months to build is the contribution of Member Alexander P. Bart (14) of Springfield, Ill., to bird contribution.

held, Ill., to one servation. The house, shown in Illustration 9, stands near a garden, which its occupants doubtless keep free from insects. ¶The model of a Curtiss



written to the Diproject written to the Director about the new department conducted by Councilor Dale R. Van Horn, Junior Engineering, telling how his articles have helped them in the construction of their projects. This month lack of space has prevented its appearance, but next month Councilor Van Horn will have ready for you a new project of the greatest interest to all Members.



10: Member Farl's project



at night, an automobile dash light is
placed below the
clock dial and connected to the batteries used
for the bell. Member Hanburger writes that his clock has been



used steadily for nearly eight months without exhausting the original batteries. original batteries.

(IA model light-house complete with a wrecked ship is the project of Member Kam-nerra R. Lyons (14) of Sunnyside, Wash. (Illustration 7). He does not explain how the ship came to

Hawk in Illustration 10 was built by Member Theo-dore A. Earl (16) of Winter Harbor, Maine. It is com-plete even to the exhaust pipes and pilot. Many pilot. (Many LabMembershave

it at all.



hardware, electrical, automotive, department and others. Go to the nearest one of these dealers and get one today.

Be the first

in your troop

to own one!

Every boy in your troop will want a Burgess SnapLite Flash-light . . . when he sees yours.

It's the handiest little flashlight

that you ever laid your eyes on. Small enough so that you can carry it in any pocket without feeling that it's there.

Made in five colors, and every

one of them a knockout, too. Red, Blue, Green, Brown and

Black-with sparkling, silvery

Battery and lamp can be re-placed in a jiffy. No trick about

Sold by these stores: drug,

streaks shining through.

BURGESS BATTERY COMPANY Mfrs. of the nationally advertised Burgess Radio and Ignition Batteries, Burgess Flashlight Cases and Batteries, and Burgess SNAPLITE Flashlights

General Sales Office: CHICAGO







How High... should a Tennis **Ball Bounce?**

Important to know-if you have hopes of some day being a champion.

The answer is 58-inch bounce from a 100-inch drop.

That is the standard of liveliness prescribed by tennis authorities.

Here's how to get that 58-inch bounce from every ball without making a single test. Ask your dealer for Pennsylvania "Pres-sure-Packed" Tennis Balls in the red-and-green metal tube. They come three in a tube ... and each is a 58-inch bouncer, live as the day it was made.

For Pennsylvania Balls are packed under pressure_same air pressure 'round the ball as inside, which means that the balls can't leak and go dead on a dealer's shelf-can't lose their original 58-inch bounce.

Pennsylvania Tennis Balls have no plug either to deflect shots or

Remember, for uniform 58-inch bouncers . . . buy Pennsylvania Tennis Balls in the red-and-green metal tube.

THE PENNSYLVANIA RUBBER COMPANY OF AMERICA, INC. Factories: Jeannette, Pa.

Pennsylvania PRESSURE PACKED **TENNIS BALLS**

In the new flaming red felt cover -if you prefer!



left arm should read right arm, and vice versa. left arm should read right arm, and vice seria.

It is a good idea for beginners to count the leg actions for each arm until they are sure that they are getting a coördinated stroke. A leg action is a beat up with one leg and a beat down with the other, taken at the same time. The leg actions must at all times be vertical to the position of the body. Therefore, in the side roll it will be noticed that the kick becomes lateral. Count your kicks, 1-2-5 for each arm. The beginner must remember to keep the knees The beginner must remember to keep the knees straight and the toes pointed back in both crawl strokes. The width of the kick for sprinting is from eight to ten inches, and in the longer swims from eight to fourteen inches, depending largely on the height of the swimmer.

The Side Stroke

The value of this stroke is largely as a rest The value of this stroke is largely as a rest measure and for life-saving, or for those who want to loaf and care nothing for speed. The position may be on either the right or the left side—choose whichever side is natural for you. The swimmer described in these instructions is on his left side, left arm extended out in front of shoulder, right arm extended back alongside of body, legs together, toes pointed.

Count 1. Bear down and inward with left arm, until it is under water and about a foor and a half back; then hook wrist and snap in to left shoulder. At the same time carry right hand forward until it reaches left hand. The left leg

SPORT

[CONTINUED FROM PAGE 443]

extends backward by bending slightly at the knee; the right leg reaches forward until it is at its widest spread. Exhale through the nose.

Count 2. Extend left arm forward to the

starting position; at the same time reach forward, downward and backward with right arm to start. Snap the legs together hard. Inhale and glide. Repeat.

The Back Crawl

Position: Feet playing up and down from surface to a point not lower than the hips (ten or twelve inches), knees allowed a little more play than in front crawl. The body at hips is bowed, two or three inches of water being above the abdomen. The nape of the neck rests in the water, and the eyes look toward the feet.

The backgarm motion is as follows: As the

water, and the eyes look toward the lever. As the arm finishes the downward stroke toward the feet, roll at shoulder, turning the palm out; bend elbow slightly and carry arm up above shoulder until the hand touches the water; then a slight roll to that side is made, and the hand catches a strong grip and is carried down toward the hips about ten or twelve inches below the surface. The same directions are followed for

both arms. The leg actions coördinate as in the front crawl—six leg beats to two arm actions. Breathe on either arm stroke and then exhale slowly.

Summer Practice

For those of you who will be trying for a place on school and college teams this fall there are a few simple training rules that should be used this summer. Some of you will specialize in the crawl, back crawl or breast stroke, or in fancy diving. Swimmers in all of these strokes should start training by taking long easy swims up to a quarter-mile at least three times a week. Try a study worm strokes on as to a train good form and economy in effort, keeping in mind relaxation of muscles and correct breathing. The divers should also keep in shape by easy-distance swims, besides keeping up acceptation of the control of the con

should also keep in shape by easy-distance swims, besides keeping up practice in diving. There are four special points that all divers should observe:

First, take a strong, easy run the length of the springboard in all running dives, and be sure of a strong lift in all standing dives. Second, maximum height is of utmost importance in all dives. Third, perfection in balance and poise is of greater importance than any other single factor, whether the diving is of plain or of twisting or of somersaulting type. Fourth, good entry into the water is the result of proper control of the three points mentioned above. Enter into every possible competition during the summer to gain as much experience as possible in all three of them.

THE MILLION-VOLT MIND

cut it into strips and in a few minutes, with paper fasteners, built a mechanism which did all that I wanted, and which I later named 'parallel double tongs.' The invention was almost unconscious, the result of a long, intense desire.'

He obtained a grant from a fund given to Cornell by August Heckscher of New York, and with the aid of an assistant developed the idea into a series of seven kinematic devices for

idea into a series of seven kinematic devices for quickly computing certain electrical relationships in machines or transmission systems. His most practical model is the Heavisidion, named in honor of the late Oliver Heaviside, the noted English mathematician.

This device, made either of celluloid strips or of steel bars with brass fittings, is simply a set of mechanical linkages which can be set at three different points. When so set it becomes fixed, and the three remaining quantities which the engineer wants can be measured by means of scales. All this time, while creating mathematical tools by his writings and his inventions, Karapetoff developed himself into a musician of most unusual accomplishments. Busy with classroom lectures and with many contacts in the swift stream of student affairs in a large American swift stream of student affairs in a large American niversity, himself always a profound student life and its meaning, a lover of nature, a nilosopher, a poet, he has always taken time for his music

As a young man he learned to practice new musical compositions upon a mute piano, an instrument which gives forth no sound in response to the pressure of his fingers upon the keys. He does this still, for he is able by looking at the music before him to hear the tones in his mind while his fingers are mastering

this is not the most remarkable thing But this is not the most remarkable thing about Professor Karapetoff's piano practice. While he is mutely learning new pieces on his silent piano, his wife is reading aloud to him from some book on history, travel, biography of the classics; and the time—it is always one hour in the late evening, when there is no possibility of interruptions from callers—is thus put to a double use.

A masterly pianist, Karapetoff is also skilful with the cello, which he studied in childhood, as he did the piano. He became particularly active in cello-playing after 1915. He shared the experience of many another cellist-the

active in celio-playing after 1915. He snared the experience of many another cellist—the difficulty of properly playing compositions written in "high music" upon an instrument of only four strings.

Finally Karapetoff began to experiment with a fifth string for his cello. He encountered much difficulty, but by a scientific study of the problem and the application of his beloved mathematics he succeeded in doing what the composer Bach failed in—he remade his cello with a fifth string, a string of fine steel. He has played with this unique instrument most successfully since 1922. Several times every year Karapetoff gives public recitals upon either piano or cello.

Karapetoff has become a sincere, open-hearted lover of "common folks" and of nature and of growing things—whether human beings, or animals, or plants in his garden. His love of mankind is part of his "theory of life"—and some sort of a theory of life he believes every

CONTINUED FROM PAGE 427]



Professor Karapetoff plays his piano for a talking motion-picture. This photograph was taken in the general engineering laboratories of the General Electric Company

engineer should have if he is to rise above the non level.

He told a group of Westinghouse engineer pprentices in 1909: "Live so that all your acts, houghts and desires be directed toward the realization of the ideals of truth, goodness and beauty," and added: "These comprise all that is

realization of the ideals of truth, goodness and beauty," and added: "These comprise all that is worth striving for."

But how about making one's living? "Why, man," said Karapetoff to these young engineers, "the very purpose of your work is to bring more truth, more goodness and more beauty into the world; unless you accomplish this you should not be paid at all! You hear business men talk about the necessity of keeping money in circulation. It is of far more importance for the welfare of the country to circulate ideas of truth, goodness and beauty among the people."

Explaining Einstein

Karapetoff's present scientific interest is cen-tered upon theories relating to the structure of matter and the nature of energy. He sees these as the big concerns of the engineers of the future. In this field, also, he aspires to start young engineers as research men and to induce them

In this field, also, he aspires to start young engineers as research men and to induce them to guide themselves by rational theories and observed facts.

He became interested in Einstein's theory of relativity when he found physicists using it in the study of the motions of electrons. To make the Einstein theory more graphic, both for himself and for his audiences, Karapetoff built a simple but ingenious model to demonstrate what the theory means, without, however, presuming to say whether Einstein is right or wrong. This model shows a large imitation eigar, and the experiment explains, on the basis of the Einstein idea of the space-time relationship, the actual rate at which the eigar is being smoked as compared to the apparent rate as seen by a person moving past the smoker at the velocity of light. This model has proved popular in Karapetoff's lectures on many occasions.

Although an influential college professor,

he confesses that he does not like teaching to the exclusion of everything else. None the less he enjoys his classes, and misses them in the summer. "I deal with young men between the ages of twenty and twenty-five exclusively," he remarked. "I do not try to be popular with them. I want them to approve of my lectures, say, ten years after graduation and do not particularly care whether they like them at the time. I am frank and sincere with them. I consider my first duty to be to inspire; the second, to develop character by pointing out means of realizing the inspiration through concrete tasks; the third, to give definite information as to methods of attack."

the inspiration through concrete tasks; the third, to give definite information as to methods of attack."

Karapetoff's personal life is rigidly systematic, governed by a careful schedule, the performance of every task dominated by a powerful, driving will. Not a single minute of his waking hours is given over to idleness. He rests, not by doing nothing physically and letting his mind wander as it will, but by changing to another useful occupation, at which he will work as intensely as at the original task. He will not permit himself, while alone, to continue with any undertaking after pronounced fatigue sets in.

He sleeps exactly long enough to refresh body and brain; reduces the mere mechanics of living—dressing, grooming, handling his accounts, etc.—to the minimum of time and effort; combines his exercise with his walk to and from his office and with garden work, one of his hobbies. When he sees a busy day ahead, he plans his activities by a fixed program which allots so much time to each matter in hand.

"When I have classes," he said, "the changes necessary to keep fatigue away come naturally. When I work at home, I always plan to have at least three tasks of an engineering and scientific nature, a book or two of general interest, music practice, a little housework, and garden chores. By judiciously changing from one occupation to another, I can keep on going from morning to night, perfectly contented, and never tired."

He loves animals as do few people; and trees and flowers are as near to him as human beings. He has a garden simply to satisfy his love of nature. He advocates and practices simplified spelling, using it in his letters and writings, and is a member of the Simplified Spelling Board. It seems perfectly natural to discover, also, that he speaks English, Russian, French and German, and reads Italian and Spanish.

These are the hobbies, the life interests, of a technician, a mathematician, an engineer; of the man whose invention of kinematic models won him an award from the Montefiore Foundati

HI-JACKERS

When the train reassembled and pulled out, the president's son had boarded the caboose with

them.

Unable to sleep, the three sat up and talked with Mike Moynihan as the train rumbled through the night. About two o'clock, after hours during which the group in the caboose unconsciously strained as if to help the engineer over the long grade, the train started downward on the east side of the mountain range.

"What will ye do, bhoys?" asked O'Shea, of fimmy.

Get off, and see what happens to that car,"

d Jim.
"Hmm," mused the old Irishman. And then, after long thought, he said, looking hard at Mike Moynihan: "Well, if I was Irish, now, and a young shack after wishin' to be a conductor, and if I had anny nervee," he paused momentarily, "Til say nothin' cud keep me fr'm goin' with ye."

with ye."

"Mr. O'Shea, could you run slow for a while, after you pull away from West Potterton?" asked Jim. "We might want to catch you."

"Shure," said O'Shea. "And take a lant'n, and a flare. Flashlight, over there, too."

An hour later, in pitch darkness, Jim Byers, Billy and Charlie crept over the side of the embankment on the far side of the main track from the car 941 on its siding. As the exposure emoankment on the far side of the main track from the car 941 on its siding. As the caboose wheels clicked off down the mountain side, and the tail lights blinked a lonely good-by to them, Mike Moynihan, darkening his lantern under his coat, slid down the bank and joined them. "If the pres'dint's son and the pres'dint's assistant can do this, I'm game, too," he whispered.

whispered.

They had not long to wait. Hardly was the caboose out of sight when they heard a rumbling caboose out of sight when they heard a rumbling and the roar of motor truck engines. Climbing up on the bank to see what happened, they saw three trucks swing alongside the box car. Eight men dismounted and, working rapidly, opened the car and began unloading its cases of alcohol and placing them on the trucks.

"Bootleggers, or they wouldn't be operating at this time of night," whispered Jim.

"What can we do? Anybody got a gun?" asked Charlie Allison in a low tone.

"Never mind," began Jim. But, before he

asked Charlie Allison in a low tone.
"Never mind," began Jim. But, before he could finish, a loud shout interrupted him.
"Drop it, hands up, all around," yelled a voice. "Y'r covered, every one of yuh!"
Startled, the four on the bank stared into the

dark trying to locate the owner of the voice.
And then a quick crash of rattling, firing guns burst on their ears and they involuntarily ducked behind the bank. They could not tell whether the bootleggers or the newcomers started the shoot-ing. But in a jiffy they knew that both sides

re firing.
"Hi-jackers," said Charlie Allison. "O boy,

were firing.

"Hi-jackers," said Charlie Allison. "O boy, is this exciting, or isn't it?"

"There goes a truck," said Moynihan, as the gears of one of the big cars grated and clashed. In a moment the roar of the motor sounded above the rattle of gunshots. All four of the youngsters climbed up the bank, then, and were in time to see the great truck rumble away, alongside the switch for a distance, and then swing into a road at right angles to the track. Men clambered to get aboard. In the light of the swinging lanterns, they could see other men, darting hither and thither after it, keeping cover as they ran, and firing at it. This fire was returned from the truck. Presently, another truck, evidently loaded with hi-jackers, swung into pursuit of the fleeing bootleggers.

"Now, quick," exclaimed Jim Byers.

"What—shall we beat it?" asked Billy.

"No, we'll grab the car!"

"No, we'll grab the car!"
"I've got me pole, an' the lant'n," said Mike.
"C'mon. Kick that chock out from under the left front wheel, one of ye! Another one, shin up and unloosen the handbrake. Twis' the wheel," he ordered.

wheel," he ordered. And almost before they knew what they were doing, the four of them had the awkward, lumbering, dead-weight box-car rolling slowly. Mike levered and pried under a rear wheel with his heavy pole, and the other three pushed and shoved with all their might. Sweating and straining, they got the heavy thing moving. In a moment its wheels clicked over the switch that Mike had opened and they were out on the main track.

main track.

"We'll git the grade in a minute, but they'll be back, and afther us!" grunted Mike. They were all jogging hard now, and panting from the exertion of shouldering against the car.

"Here's the grade—up we go," yelled Mike.
"And just in time, for here they come!"
Running beside a corner of the car, the four hurriedly and in turn clambered up the iron ladder to the top of the car. The lights of one of the motor trucks, which wheeled alongside

the tracks at a crossing, shone on them from

behind. Men came running. Shots rang out.
"Git down, flat," yelled Mike, and all four threw themselves down on the board roof.
"Better hold her?" asked Jimmy. "Run

"Better hold her?" asked Jimmy. "Run away?"

"And git shot? Let 'er roll," said Mike.
"I'll grab 'er soon as we git away—but look!"
One of the pursuers, speedier than the rest, overtook the car before it gained more momentum, and clutched a handhold. In a moment he would be up and over the top of the car. Jimmy stood up to kick him off when his shoulders appeared over the edge of the car, but Mike dragged him down. "Back, gangway," he ordered. And then, as the hi-jacker appeared, his shoulders showing in the dim light of Mike's lantern, Mike swung his pole with all his might. He saw the hi-jacker's automatic, and he did not hold back his strength. The blow caught the hi-jacker on the shoulder. He vanished, falling to the track below in a heap.
"What a wallop!" yelled Billy.
"When there's a gun on ye—" muttered Mike, but did not finish the sentence. Instead, he edged over again toward the wheel of the brake. The car gained speed, and in a jiffy he was up and on his feet, straining at the brake to gain control of the lurching, swaying car.
"Round this turn there's a sharp grade," panted Mike.
"Give you a hand." said limmy, and, shoul-

"Round this turn there's a sharp grade," panted Mike.

"Give you a hand," said Jimmy, and, shouldering against Mike, he too put all his strength on the wheel. Billy and Charlie Allison felt their way to the front end of the car and sat down with their feet over the edge. Then they lighted a flashlight and a flare. Swinging and lurching around the curve, the car gradually slackened speed, and the screeching brakes proclaimed they held control.

"Any passenger behind us?" asked Jim.

"No, but No. 14 ketches us when we reach Potterton yards. Lots of time, and Tim ain't far ahead of us."

So they rode, the four of them, a loaded and heavy box-car down the mountain side, through the darkness of early morning. All

through the darkness of early morning. All held their breath, for all of them knew their peril. Supposing—but Mike and Jim wrestled with the brake successfully every time the car gained more speed than they thought safe.

Another of the seemingly endless curves, a steeper grade, and then a shout simultaneously from Bill and Charlie. At the same instant they heard the whistle of Tim O'Shea's train, slowing down for Potterton. Around the curve, and a hasty glance revealed the winking lights on Tim's caboose.

a hasty glance revealed the winking lights on Tim's caboose.
"Hold 'er," yelled Mike. One last mighty wrestling and tugging, and the car slowed down. Charlie and Bill yelled and whistled. Old Tim O'Shea, lantern in hand, came to the door of his caboose, looked, and then rubbed his eyes before the strange sight bearing down on him. A gentle thud, a second bump, and car No. 941 rolled its weight against the caboose.
"What'll we do with 'er?" asked Tim, when the train came to a stop in the yards.
"Set her on the siding with the other two for the wholesale chemical people," said Jim. "If this one does not belong to them, we'll notify the prohibition officers to come and confiscate it."
"Let's get some breakfast; I'm hungry," spoke

'Let's get some breakfast; I'm hungry," spoke

"Let's get some breakfast; I'm nungry, "Pup Billy.

Early that forenoon, Jimmy called president Allison in New York by long distance, and told him the whole story despite the President's interruptions to thank and congratulate him. "And, Mr. Allison," said Jim, finally, "old man O'Shea ought to have a vacation with pay before he's retired, and young Mike Moynihan will make a fine conductor. Fire Marsch at Swaim, and maybe this business will stop."

"Everything noted and approved," chuckled Mr. Allison. "Thank Charlie and Armstrong for me, but stay out of liquor wars after this, and

Mr. Allison. "Thank Charlie and Armstrong for me, but stay out of liquor wars after this, and run along to your football. Luck to the team!" Charlie Allison rode back to Puddy with them

Charlie Allison rode back to Puddy with them on the first fast train west.

"Wowie, that was some night," he exclaimed, before he said good-by and left the car. "I never played football, but I'll bet it hasn't got anything on this stuff."

"Well, it might compare, for excitement, with hi-jacking bootleggers," said Jimmy Byers, slowly.

lowly. "Or with hi-jacking hi-jackers," Billy inter-

rupted.
"But not with hi-jacking hi-jackers and boot-leggers both at the same time!" Charlie ex-claimed, laughing.
"No, no; after tonight, football ought to seem easier," said Jim.

m easter, " said Jim.
"And safer, hey?" queried Charlie.

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Tea Beneath the Trees

Recipes to make your lawn party a success

By ALICE BRADLEY, Principal of Miss Farmer's School of Cookery

A GARDEN party, on your lawn or under the trees of your orchard, is among the best of all ways to entertain in summer. Perhaps you will want to give such a party simply for the entertainment of your friends, perhaps to raise money for your favorite charity. In either case your task will be much easier if you have ready beforehand the right recipes for your refreshments.

In Europe during the warm months many of the cafes move their tables and chairs to a terrace and shade them with great striped umbrellas or awnings. If you are giving the party on your lawn, you will be able to add a similar note of color by the same means. In almost every town there is a caterer from whom awnings and sun umbrellas can be rented. In an orchard or beneath trees, you will need no other shade, and your decorations can include gay paper lanterns instead. At night these lanterns must be watched carefully, unless you use electric bulbs, for they are ready sources of fire.

If there are to be many guests, serving the refreshments is apt to be a difficult problem, particularly if you are giving the affair for charity and are charging for the food; small booths erected here and there will prove a great help. Since they take time and money to build, you must plan for them carefully. Their decoration is limited only by your own ingenuity. You may, for instance, cover the sides with green crepe paper, and hang white paper cut like icicles from the table and two arched wires overhead. The girl at such a booth should be dressed to match, in a crisp white dress and an icicle cap. The booths may be of the simplest possible construction, requiring only boards, a hammer and nails, and crèpe paper to build them. For the booth from which the punch is to be served, Punch and Judy decorations are appropriate. Be sure to supply some means of keeping the punch thoroughly chilled.

Trays on which to serve the sandwiches and little cakes can be decorated with colored paper or doilies. As a further note of color the cakes should be topped with confection

Additions to the Party

For a large lawn party, a grab-bag may be introduced. A novel way of doing this is to attach the bags to the side panniers of a girl dressed in an old-fashioned gown. For a charity event the grabs may be sold; otherwise, given

For a more elaborate party you may ask one of your friends to make up like a gypsy and

tell fortunes by cards, by palmistry, by looking into a glass globe or by astrology. She may be in a small tent or booth with many hangings to create an atmosphere of mystery. Or if she is dressed as a Turkish woman, her identity may be hidden beneath a veil, and she can give a great deal of amusement in telling her friends the most surprising fortunes.

A novel kind of lawn party may be planned by having those in charge and the assistants dressed like characters from Mother Goose. The Queen of Hearts would serve little tarts or turnovers; Mary, Mary, quite contrary, would sell or give away small bouquets of flowers, and Jack and Jill would preside over the punch bowl. Another idea is to have Alice-in-Wonderland characters. Or an entire French

Or an entire French or Spanish atmos-phere may be ob-tained by having all the assistants and those in charge wear the native

wear the native
peasant costumes
which are so colorful. Either one of these nations would be suitable,
the Spanish being exceptionally good this season.
Here are some refreshment suggestions for your
party on the lawn.

PEANUT MINT SANDWICHES

PEANUT MINE SANDWICHES
For fifty large sandwiches buy one large loaf
each of graham and
white sand wich
bread. Place one-half
pound of butter in a
bowl and cream until
coft. Add gradually soft. Add gradually to it one pound of

peanut butter and work them together until smooth. Break up two glasses of mint jelly with a fork. Cut the crust off all sides of the loaves of bread before slicing with a sharp knife. Heating the knife blade occasionally in a hot flame makes it cut more smoothly. Pile up the slices and cover them with a damp towel or cheese cloth. Spread the graham bread with the butter mixture and the white bread with jelly. Put a graham and a white slice together and cut crosswise very carefully. For these sandwiches rye or whole-wheat, or any dark bread may be used instead of the graham, and the fillings reversed. Bridge cutters make tempting-looking designs and are appropriate. Place in a covered crock or pail until needed.

SMALL ROLLED SANDWICHES

In order to make these sandwiches properly, one must have fresh bread and a very sharp knife. Purchase one small loaf of fresh white sand-wich bread and two small jars of vegetable color paste, rose

of vegetable color paste, rose and green.

Divide % pound of cream cheese into three equal portions; leave one portion uncolored. For the second take a very little bit of green color paste on the end of a toothpick and work enough into the cheese with a teaspoon to give a very delicate green. In the same way color the third portion a very pale pink. If necessary work the cheese with a wooden spoon until soft enough to spread easily.

Slice the crusts off all sides of the loaf before cutting. Then turn the loaf on its side and cut it into six slices the long way, having each slice 34 inch wide, or seven or eight

slices ¼ inch wide if you want smaller sand-wiches. Spread one-third of one of the long slices with part of the pink cream cheese, the next third of that same slice with the white cheese, and the last third with the green. Start to roll at the pink edge and roll up quickly as for a jelly roll. Wrap in wax paper and put in a closely covered tin box in a cool place until ready to serve. Spread the remaining long slices in the same, way and roll each up separately. Just before serving unwrap the rolls, cutting each into eight or ten rolled slices as in cutting a jelly roll. Serve on an attractive plate and garnish with a few sprigs of watercress. and garnish with a few sprigs of watercress

FRUIT PUNCH

Put one cup of water and two cups of sugar in a saucepan, stir until the sugar is dissolved, bring to boiling point and cook ten minutes. Add one cup of strong tea, two cups of strawberry syrup or juice from canned strawberries and the juice of five lemons and five oranges or 13/2 cups of crosses into cook can be lemon in the lemon in the lemon in the strain in the cup of the state of the strain in the cook can be considered in the cook can be considered in the cup of the cook can be considered in the cook can be considered in the cook can be considered in the cup of the cook can be considered in th cup of orange juice or one cup of lemon juice.

Add contents of one can of crushed pineapple and let stand thirty minutes. Strain and add ice water to make six quarts. Just before serving add one cup of maraschino cherries and one quart of charged water. This will serve fifty people.

CUP CAKES FOR FIFTY

CUP CAKES FOR FIFTY

Cream 3/2 cup of butter, or other shortening, add two cups of sugar, a tablespoon at a time, beating five minutes in all or until light and fluffy; then add four egg yolks and beat until thoroughly mixed. Sift together 31/2 cups of cake flour, five teaspoons of baking powder and 3/2 teaspoon of salt. Add to first mixture alternately with 11/2 cups of milk. Add four egg whites, beaten stiff. Turn into paper cups, filling only half full, and bake ten minutes in a moderate oven; then increase the heat slightly or to 375° F. and bake for fifteen minutes or until done. Remove from pans and frost if desired. Cooking in fluted paper cups saves greasing and keeps the cakes fresh.

BROWNIES A LA MODE

Mix one cup of sugar and 1/4 cup of melted



shortening. Add one egg, unbeaten, two squares of melted bitter squares of melted bitter chocolate and ¾ tea-spoon of vanilla. Sift in ½ cup of already sifted flour and add ½ cup of nut meats cut in

pieces. Grease a nine-inch square pan, cover bottom with wax paper, grease paper and pour in mixture. Bake in a moderate oven or at 350° F. for twenty to twenty-five minutes. Cut into three-inch squares twenty-nve minutes. Cut into three-inch squares while still warm. Serve with a small scoop of ice cream and if desired cover with a marshmallow sauce made from ½ cup of cream whipped and four cut marshmallows. (When cutting marshmallows use scissors dipped in warm water.)

WINCHESTER NUT BREAD

WINCHESTER NUT BREAD

Pour ¾ cup of cold water over ½ cup of brown sugar. When sugar lumps are dissolved, add ½ cup of molasses and ¾ cup of milk. Sift together one cup of bread flour, 1½ teaspoons of baking powder and ¾ teaspoon of baking powder and ¾ teaspoon of soda. Add two cups of unsifted graham flour. Combine mixtures and ¾ cup of walnut meats cut in rather large pieces. Bake in medium-sized greased bread pan two hours in a slow oven or at 275° F.

VANILLA PENNIES

Oil lightly two or three large cookie sheets. Put y_3 cup of shortening in bowl and let stand in warm room until soft but not melted. Work

with wooden spoon until like whipped cream. Then add one cup of sugar a little at a time, beating and stirring until well blended. Add one egg well beaten and stir in two teaspoons of vanilla. Then measure two cups of sifted flour and sift again with two teaspoons of baking powder and ½ teaspoon of salt. Add a heaping spoonful of this to first mixture and mix well. Then pour in a portion of ½ cup of milk. Continue adding flour and milk alternately until each is used. Drop from a teaspoon on to cookie sheet, making shapes the size of a fifty-cent piece. Place a half nut meat or a sprinkling of chopped nut meats or sugar or coconut on top of chopped nut meats or sugar or coconic on top of each cookie. Bake twelve to fifteen minutes in a moderate oven or at 350° F. Remove immedi-ately from sheets and place on cake rack to cool.

AFTER-DINNER MINTS

Put two cups of sugar, 3/2 cup of boiling water, 1/2 teaspoon of cream of tartar, and one teaspoon of vinegar in a saucepan and mix thoroughly, stirring until all the sugar is dissolved. Bring to the boiling point and boil without stirring until 265° F. is reached or until the mixture will become brittle when tried in cold water. Pour on an oiled marble slab and leave undisturbed

until cool enough to handle. Lift the candy, avoiding any move ring motion, as stirring may cause the candy to

may cause the candy to sugar, and pull, doubling the candy over evenly and pulling out as long as possible, keeping the grain all one way. Do not twist. Add three drops of strong oil of peppermint during the pulling. When the candy is too stiff to pull longer, stretch it out into a long rope, ½ inch in diameter, and cut with seissors into one-inch pieces. Put at once into a bowl of powdered sugar, stir until well coated, and when dry put into a glass jar, cover, and let stand several days in a warm place, when candies should become tender and sugary. Vegetable coloring and different flavors lend variety to the mints.

An afternoon tea such as I have just described An afternoon tea such as I have just described may be given for almost any occasion during the summer when some sort of entertainment is desired. A summer birthday party would be very lovely if celebrated with an afternoon lawn party. It is so much more pleasant to entertain all your friends at once, many of whom it would be impossible to invite if the affair were restricted to the house.

If you wish, you can continue the party into the evening and have dancing on the lawn by spreading a heavy canvas on the grass in a level spot. Japanese lanterns hung in the trees will transform the scene into a veritable fairy-land come true.



osphate baking powder. Runderful cake of delicate, of the control of the delicate of the delic not only brings out the delicite, eve of all the other ingredients are





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RUMFORD COMPANY

Letters from Jan

III: Girls of Fourteen

Prof. DEAR:
You've no idea how humming this book publishing business can be at times. It's left me with my mind way up high. And, in the midst of everything, your letter came. I had to read it at once, and it raised a storm of protests which all but set fire to the building. I wanted to say no, no, no, to every sentence. Where did you pick up such a bundle of absurd ideas? You are met uply. I'm not are met uply. I'm not

are not ugly. I'm not going to tell you a lot of fibs about how stunning you are, because you're not. This letter is going to be brutally frank, I see that. But you mustn't mind—and hear me to the bitter end. Without flat-

tery, it's worth it.

Now, did you ever
hear of a heroine of A heroine of fourteen years about fourteen years, tall for her age, and thin? With very short black hair, fine high forehead, gray eyes flecked with green, rather large nose with an interesting tilt at the end, and dark olive skin which should be beautiful in texture when it clears up a bit?



mon every morning. If you were going to look like these powdered and painted, frizzed and foolish girls, you might complain.

But what can you do now besides philosophize? Just this—with both eyes on the future take care of your hair and skin, keeping them always clean and healthy. When you look into the mirror say something like this: "Funny Face (for joking at yourself helps a lot), Funny Face, just think how lovely you are going to be ten years from now."

There is no reason for you to bemoan that high

There is no reason for you to bemoan that high forehead, which is going to mean intel igence and dignity later. Possibly you might try combing your hair a little farther over your forehead—that would make your face look less thin. If you don't like the color of your eyes, wear blues. They kill it temporarily—but it will be there when you need it later to be sophisticated with.

And for that too-thinness, try drinking milk, Peg. I know you don't like it, but you can disguise the taste with a little chocolate syrup, and you do like chocolate malteds. Order them next time at Pop Gunn's soda fountain instead of the lemon and lime, which is thinning. There is no reason for you to bemoan that high

Your letter to me I have burned, as you asked. Its secret has died with it, and now nobody thinks that Peg Whitney is ugly! Not even Peg herself. Jan.

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DEAR HAZEL GREY:

DRAR HAZEL GREY:
I am a girl who enjoys what the G. Y. C.
Members do, and I am interested in worthwhile achievements.
Will you please write and tell me how
I may join the G. Y. C., earn the right
to wear the blue and gold Keystone membership pin, and enjoy all the advantages
of being an Active Member?

My name is	
My age is	
Street	
Town	State

Uneven teeth, slowly being straightened, a good chin, and slim neck somewhat long, and slender hands and feet which take large sizes in gloves and oxfords? gloves and oxfords?

Well, there you are, Peg. Do you recognize yourself? Not so good right now, perhaps, but have you ever thought of what a connoisseur of looks would say if he saw the combination?

No? "Heavens, what a woman she is going to make!" That's what he would say. And it's the truth

the truth the truth.

No girl is really pretty at fourteen. Or rather no girl looks half so well at fourteen as she will at twenty. I know, for I've been both. If her seemingly poorest features are the very ones remained for presonality and charm at twenty.

quired for personality and charm at twent then she's favored of the gods. And that is yo Peg.
Your rangy length will become height, your thinness become slimness, your face fill out to soften the nose, and your skin grow clear, the teeth straight, and the neck round—and your hands and feet like those of a patrician.

Holding this in mind, Aunt Marcia makes you feel wear that brace which you say makes you feel.

nality and charm at twenty

Holding this in mind, Aunt Marcia makes you wear that brace which you say makes you feel like a muzzled bull-pup on a hot day. Why she shouldn't have told you that it was with an eye to the future is more than I can see. Possibly she thought that it might make you vain. But I disagree. It is much more dangerous for a girl to underestimate her good points. But you don't need to, for you are going to be more beautiful than Elinor ever has been or ever will be. This is a secret, though, which you must keep locked up tight with that idea that you have of being ugly, until the nice secret has killed the ugly one off.

one off.

I know that the next few years do seem the most important of all.
You want to be asked places and be popular now. Of course. What does it matter ten years from now, you say? But it is a funny thing. Even when you've Even when you've reached my great accumulation of twenty-three years it is this twenty-third year which seems to be the only one that really matters. But 500 are going to be lovely when you're twenty-three, and it will be worth waiting for. You will have no need of permanents, reducing exercises, or any sort of make-believe. I wish you could see some of the superficial beauties I have could see some of the superficial beauties I have to look at on the way to the office across the Com-



thinning.
I've noticed for some time that Aunt I've noticed for some time that Aunt Marcia is inclined to get too youthful patterns for your dresses. They emphasize your thinness and length. Would you make a dress for yourself if I sent you a cunning two-piece pattern I saw yesterday and some grapefruit silk jersey next pay day? Elinor could help you; she iss marvelous with scissors.

Speaking of Elinor, she isn't to see this letter. Remind her, if she gets curious, that it's almost her birthday, and look mysterious. I'm saving up to get her some rhinestone buckles.

Your letter to me I have burned, as

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"Pulse!" he said, frowning.

"Pulse!" he said, frowning.
"How long have you had a pulse?"
"Why—I was born with it!"
I said, surprised.
"Bad," he said, shakin' his head. "Very bad. If it had just come on, maybe we could cure it. Well, well, perhaps under our treatment it will go away. Those things sometimes do. I recomend the pineapple-juice baths every morning for a start—with perhaps a massage with the tops. Good day. I'll send my bill the first of the month. It will be two pink sea shells a visit; three, if I have to go and see you."

I went away in a daze, with 83 and 27 still with me.

with me.

"Too bad," said 83. "What is this pulse thing? Does it hurt much?"

Then I told 'em what a pulse was. I guess I told them right out that No. 65 didn't know as much as he set out to.

"No. 50 has been saying that all along," said 27.

Who's 509" I asked.

"Who's 50?" I asked.
"He's the fault-finder of the place. Luxuria acted like a double dose on him. He finds fault with everything and everybody."
Well, I was just as pleased we didn't meet him. It seemed to me like a good deal of fault-findin' had been done with me already. Old No. I had ort of questioned my sober truth-tellin' proclivities, as you might say, and, bein used to have my word taken as literal, I was a mite ruffled. And the prospect of spendin' any time at all in

my word taken as literal, I was a mite rumed. And the prospect of spendin' any time at all in solitary confinement in one of those caves didn't make me chortle any too much.

But, as it turned out, that last wasn't so bad. I slept sound that night and when I woke the next mornin' I found that someone had put a jug of water and a breadfuit by my side. I ate ing of water and a breadfruit by my side. I ate and drank hearty. And I'd no sooner finished than I heard a hail. It was my old friends No.

27 and No. 83 again.
"Cheerio!" laughed 27. "Come on out.
No. 1 commutes your sentence, seeing you're a visitor, and so you get another chance."
"Probably won't do much good," groaned 83.

"Probably won't do much good," groaned 83.
"Probably you'll get a worse sentence."
I joined my new friends, and we hastened over to the cave of No. 1. He was out in front, sunnin' himself.
"Visitor," he said, "I feel we owe you another chance to explain a few things. Perhaps the Court was unduly severe."
"Thank you," I said.
He squinted at me. "Now, how high did you say those waves were when the McGinty ran into the storm?"

"A good hundred and fifty feet high," I said, breathin' a big lungful of Luxuria air.
"And the Italian Spire-faced Dogfish?" he asked, leaning forward.
"On second thoughts, that fish must have

NOTHING BUT THE TRUTH

been a Peaked-nose Whale. Much bigger than the Italian Spire-faced Dogfish. And as I said, we were cuttin' the ocean so fast, the buttons on my vest caught fire and—"
"Hum, hum," he said, kind of faint-voiced.
"And when you let go, what happened to the —poor fish?"
I breathed some more of that gorgeous air.
"He hit a rock on the first bounce about a mile away and broke in pieces! It was a terrible sight. And then I swam in here. And I remember once when I was in the Indian Ocean a terrible typhoon came up and knocked the a terrible typhoon came up and knocked the masts into sawdust and-"

asts into sawdust and—
No. 1 hit the gourd with his hammer.
"I see it all now," he said. "You can't help
It is this air and the water and the fruit. As the Court has no jurisdiction over the ac-tions of one's over-developed salient feature,

tions of one's over-developed salient feature, you may go in peace."
"Thank you, Your Honor," I said, bowin'.
"On one condition," he interrupted me;
"that you report here every day and recite to me the details of that wreck. It will be a

Thank you, Your Honor," I said, fillin' t "Inank you, four rionor, I sate, initial be a pleasure, I am sure, to tell you about the Double-barreled Lane-faced Sea Serpent, and how he brought me to these sunny shores and—"
"Save it!" said No. 1. "I think I need a wee whiff of smelling salts. No. 27, go in the cave and get them for me. Thank you. Court's dismissed."

We went away from there. It was a beautiful day, and we walked all about the island, listenin' to the birds. I spied some handsome big tangerines on some bushes and, bein' hungry,

"I must have some of those wonderful tanger-ines," I said. "They're bigger than oranges," "Those aren't tangerines, old 48," said 27. "Those are raspberries. Very fine, too."

ELL, we had a great time on Luxuria; one of the few times I was shipwrecked when I really enjoyed myself. The

days passed on wings.

I established a sort of a—a clubhouse in a cave at the end of the row. I told stories to the Luxurians, and they clustered around me every day—just like you boys do—while I spun 'em

yarns.

And my brain never worked better. Lots of times I'd start off on a story, not knowin' where I was goin'—and it would just naturally unwind itself. Wish I could do it now, but then I haven't breathed the potent air of old

Luxuria for many years. However, I sort of feel it's in my blood.

I stayed on Luxuria for four months. And then one day the wonder of wonders happened. A ship stood into Luxuria Bay, the first in many years. We got a signal to her and arrangements were made to rake me off. to take me off

to take me off.

I remember the good-by I said to No. 1. And 83 and 27 were there too. We all shook hands. "It is ever thus," said 83, tears in his eyes. "The best of friends must part. I knew you'd go and leave us sometime. I do hope the ship won't go down. It looks leaky to me."

No. 1 gravely shook hands. "Just for old-time's sake, 48, tell me once again about that wreck—and the fish. It was a—a—"
"No. 1, I've never dared to tell you what that fish really was. But as I'm leavin' here for good I owe it to you. It was so rare a fish that I didn't think anybody would believe it. But it was the Thousand-foot Spike-faced Dolphin, the largest fish known. And very fast."

He sighed and closed his eyes. "And—how fast did a pull you know the mater. 48"

the largest fish known. And very fast.

He sighed and closed his eyes. "And—how fast did he pull you through the water, 48?"

"We weren't in the water after the first jump.

"We weren't in the water after the hiss jump.

He planed with the tip of his tail. And once
the tip of my boot hit a wave—"

"Yes, yes!"
"And it exploded like a gun!"
No. 1 nodded and licked his lips. "And what

happened to the fish?"
"Well, as I said before, he hit a rock—"

"Mell, as I said before, he hit a rock—"
"Ah, ha!"
"And, of course, his nose stopped short.
But that didn't stop his tail necessarily."
"No, of course not," said No. 1, dreamily.
"So his tail rushed right on around him, turnin' him wrong side out. When his tail hit the rock, naturally that pushed his nose back in the opposite direction. So he just shot back over the course he'd come. He missed me by only a boar's length only back. As I giver saw the

were the course he'd come. He missed me by only a boat's length goin' back. As I never saw the McGintyagain, I ve always thoughthe must have bounced back with such terrific force that he probably hit her andshe sank, rammed like a torpedo."

"Thank you, 48," said No. 1. "I can now die happy. Even if I haven't ten everything, I've heard about it. Here is a slight token of my esteem. Take him and treat him kindly, as I know you will."

He handed me a big square bundle covered with burlap. I heard somethin' shufflin' around inside. And then sounds came from it.

"It's the truth, the whole truth, and nothing but the truth!" it squawked.

"And so," said Captain Pen, "I had to say good-by. I took my parrot and went aboard. And ever since Napoleon has been with me. We've seen a heap of things, haven't we, Nappy, old boy?"

"It's the truth!" sheilled Napoleon.

old boy?"
"It's the truth!" shrilled Napoleon.

Tony was keen to be one of the party to visit Mr. Goodwin's office.

"Salesmen often work in pairs," he insisted. "I can be Smith, and Tom can be Jones. Or I can be a friend of yours—that is, of Miss Oliver's—come along as a reference for her family's financial standing. Oh, see here, Jo, let's keep my original idea—father (me), son (Tom), and daughter (you), like the Cains, come down from Searsburg Mountain to get the money for our taxes."

down from Searsburg Mountain to get the money for our taxes."
"No, Tony." Joan was firm in her opinion.
"If you came in disguise, you'd be just an added risk. And if we tried to borrow on land, Mr. Goodwin would want to look at it first. Besides, the farmers from Searsburg Mountain don't come to town nowadays in overalls, with hayseed in their hair. The Cains are the only stage farmers left around here, the one exception to prove the rule."

to prove the rule."

The only disguise she permitted Tom Carter
was a side-splitting stammer, which he defended vigorously.

"I can have time to think while I'm stammer-

ing," he explained, 'and so can you. According to all you say about the smartness of this Jasper person, we'll need it."
"Now tell me exactly what Mr. Hawkins has told you to do," ordered Joan, and succeeded in confusing Tom so thoroughly that he was quite

containing tom so thoroughly that he was quite ready to go back for further instructions. A second rehearsal found him letter-perfect and prepared for all mental emergencies. So it was decided that he and Joan should see Jasper that very afternoon. A faked message from her home had been arranged to get his stenographer out of the way.

"My dad says that if you want him to he'll come with Mr. Adams," Tony offered. "He's keen to get back your mother's thousand

SO the leading banker of Hillsboro and a lawyer whose next case was coming up in the Supreme Court at Washington in three days sat for an hour in a vacant office in a build-

STRICTLY BUSINESS

CONTINUED FROM PAGE 437]

ing owned by Steve Adams, waiting for their signal, which was to be a telephone call for "Mr. Smith," who would be interrogated as an authority on the current price of tires. They hoped, by immediately confronting Jasper Goodwin with a statement confirmed by Joan Goodwin with a statement confirmed by Joan and Tom, to frighten him into giving up whatever cash he had in the office, which Mr. Adams had discovered was usually a large sum, and further to convince him that the air of Hillsboro would be unhealthful for him in the future. It happened, however, that just ahead of the banker and the lawyer there climbed the stairs to Jasper's office a shabby slouching figure in overalls, with high boots, bushy beard, and a wisn of hair stricking through a torn hat; just

wisp of hair sticking through a torn hat: just the sort of almost obsolete hill-farmer that the boys had wished to impersonate. Only this farmer had added a touch of the brigand to his equipment: in one hand he carried an old automatic pistol, and before he opened the door he made sure that his weapon was ready for busi-

Tom Carter had just left the telephone.

"Which of you's Jasper Goodwin?" inquired a voice from the doorway; the door had opened so softly that no one had noticed it.

"I am," said Jasper importantly. "I'm—er—engaged just now. Could you come back in half an hour?"

engaged just now. Could you come back in half an hour?"

No, I couldn't wait that long," drawled the disheveled figure. "Hold up yer hands, Jasper Goodwin, 'n' tell me whar you keep yer mortgages! I wouldn't set 'n' let a varmint burgle my house, 'n' I won't let a varmint steal my farm when the mortgage wa'n't knowingly signed. You tear up the mortgage 'n'! I'll lower my gun."

It was old Sam Cain, come to set his wrong right in the direct, uncompromising fashion in which he dealt with "varmints" of the wild.

"Better do as he says, Goodwin." Stephen Adams's voice, cool and amused, came from

behind Cain's slouching shoulders. "You'll never get that farm. We're out gunning for you, too, this afternoon."

"Better give him the fifty dollars' attorney's fees too, Goodwin," Mr. Adams went on. "And after we've heard the terms on which you were going to loan money to this girl, on a contract with this boy, I think you'd better return the thousand dollars Mrs. John Jordan paid you for stock about a week ago, and the two hundred contributed by Miss Susan Wideawake, which even you should have been ashamed to touch, also the six hundred that Miss Marks recently entrusted to you. And then—you'd better leave town."

Slowly Jasper Goodwin reached into his pocket, produced a fat wad of bills and peeled from it eighteen hundred-dollar bills. "Anything more I can do for you gentlemen?" he sneered, as he handed Stephen Adams the money.

"No," said Stephen, "I did hear the sheriff

I can do for you gentlemen?" he sneered, as he handed Stephen Adams the money.
"No," said Stephen, "I did hear the sheriff would be wanting to talk things over with you, but if you should decide to change your residence right away I don't believe he'd mind, and I know the Chamber of Commerce wouldn't. My only advice to you is: look out next time and don't let a smart little girl like Joan Jordan get on your trail."
"Don't know any such person," growled Jasper. "There she is!" Stephen pointed at Joan, who couldn't resist laughing in the face of the discomfited Jasper. He had been so complimentary to "youth and beauty" all the afternoon!
He looked back at her with an angry glare, then turned away swiftly, as if realizing at last that the situation was entirely too much for him, reached into his open safe, took from it another huge roll of bills and a bundle of securities, strode out of his office, got into the lowhung car, and was seen in Hillsboro no more.

Mr. Cain, who had been standing immobile by the door, now cleared his throat and spoke: "Mebbe you gentlemen think I was pretty vi'lent but when my girl tole me how the Jordan girl had the grit to tackle this skunk I thought I'd better not be behind in m' duty."

BOOKS TO READ

The Carmagnole and Other Things

HAVE heard it said that no dull book was ever written about the French Revolution, but I never thought I would make my morning coffee wait for a book about it. This, however, was precisely my experience with The Red Peron's Legacy, by Alfred H. Bill (Longmans, \$2), which I opened before breakfast and could not put down until I had finished it, and everything was cold. It opens in New York, where the boy who tells the story lived with his father when Washington was President. His French relatives send for him, and after a farewell dinner at Fraunces Tavern he takes ship and arrives in Paris on the very day of farewell dinner at Fraunces Tavern he takes ship and arrives in Paris on the very day of the massacre of the Swiss Guards. His first experience abroad is being caught up in the terrible crowd, spattered with blood and dancing the "Carmagnole" to the most ferocious music in all the world. The Revolution goes furiously on while he hunts for treasure, but this hunt and his own alarming affairs are always woven into the wild days of 1792-3.

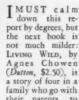
It was well that I then took some nourishme

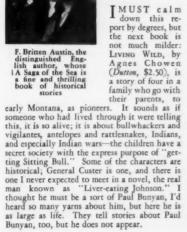
alarming affairs are always woven into the wild days of 1792-3.

It was well that I then took some nourishment, for the next book I opened was Virginia.

Bandt hat (first published in The Youth's Companion) is another thriller, and nearer home—the neighborhood of Gettysburg, Pa. A quiet girl who asks Mother's advice about everything is left alone in the farmhouse for a few days, save for neighbors, on the telephone, and a hired man, with a mean disposition, down the road. Just as she is locking up to go to her uncle's for the night, a dark form in the doorway staggers, sways, and falls with a crash; across his check is a bloodstain, and two of his fingers are scarlet. There has been a holdup at the post-office, she knows. Now, would you send for the police? Virginia does not, and it is a good thing she

does not, and it is a good thing she doesn't.





ANYONE might have thought from my col-umns that girls did not read this magazine; Anyone might have thought from my color upons that girls did not read this magazine; I have always given so much more space to books for boys. But here are two that should make up for this neglect, for they are that unusual and much-needed type of fiction, grown-up novels with young girls for heroines—not horrible examples, but genuinely nice girls. SALAD DAYS, by Theodora Benson (Harper, \$2.50), is the amusing and enlightening tale of two sisters so nearly the same age that the one who has just made her début is eagerly waiting for the other to get through with boarding-school and join her in society. They write to each other, and their letters and their conversation are so amusing and so full of information about school and parties and what they think about life, and above all about the ways of young men, that you read on, chuckling to the close. The Book ov Better, by Eleanor Mercein (Harper, \$2.50), is about the young girl who appeared in her much-praised novel Baquernia. This earnest little large-eyed creature is now sixteen, and her aristocratic grandmother under-

By May Lamberton Becker



takes the state business of arranging her marriage. This calls for several journeys into Spain, much incidental excitement,—in which a very modern American girl takes some part,—suspense, and some real romance, with which indeed the journeys happily conclude.

THE GIRL IN WHITE ARMOR, by Albert Bigelow

Paine (Macmillan, \$2.50), comes out in a new edition for the five-hundredth anniversary celebration of Joan of Arc; it is abridged from his two-volume work—which has much inhis two-volume work—which has much information about the places through which she passed and what is now left there of what she story than in the scenery. This marvelous true story he tells with sympathy and vigor; he has studied it carefully and brings out its tracir powers.

the has studied it carefully and brings out its tragic powers.

The Haunted Ship, by Kate Tucker (Macmillan, \$2.00), takes place on the coast of Maine: a stranded ship has been pushed almost into the shore road, on which its figurehead looks down with an unpleasant stare, and if you had courage enough to look that way at night you might see mysterious lights moving on board. Three young people from the city and one boy from the place do screw up their courage and investigate, and in time what they find is plenty. Welcome—Strander, by Neil E. Cook (Appleton, \$1.75), is the name of a settlement in Arizona, where a fifteen-year-old boy, drifting about, strikes up a friendship with a miner reputed to be a Tartar, and goes into business with him. Can you imagine such a combination raising flowers? This is only a small part of their activities; another is curing the rheumatism of one of their boarders from the East by playing chess with him at the bottom of East by playing chess with him at the bottom of a mine so hot that it bakes it out of him. You will see that the author has a sense of humor; it is a breezy Western tale that sounds natural.

A SAGA OF THE SEA, by F. Britten Austin (Macmillan, \$2.50), is a series of stories, in which historic events take place but with fictitious characters, telling together the long story of sea-fighting. I found it far more interesting than I expected, and pass it on to anyone who would like his history brightened by good stories, from the time of the Phoenicians, who kept the secret of where tin came from so well that they wrecked their ships rather than lead the Romans there, to past the battle of Trafalgar.

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There is a companion volume called A SAGA OF THE SWORD, by the same author. A fine series of biographies of FAMOUS OLD-WORLD SEA-FIGHTERS, by Charles Lee Lewis of Annapolis (Lesbrog, \$3.00), is another good book for naval history; this goes from the Greeks to the World War, and is illustrated with famous pictures. (Just remember I told you that WITH THE EAGLIB, by Paul Anderson (Appleton, \$1.75), is a good story if you are reading Cæsar; it is about the Gallic wars, and I will speak of it later.)

Boy Scouts have two books this month

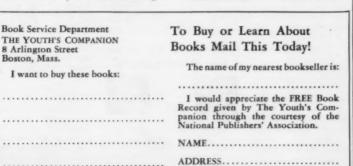
Boy Scouts have two books this month made especially for them: one is the prize story, There Points or Honon, by Russell Gordon Carter (Little, Brown, \$2.00), about a boy's struggle to get to Annapolis. This book won an award over many competitors for the best novel based on Scout ideals. The other is Matching Mountains with The Boy Scout Uniform, by Edward F. Reimer of the National Editorial Staff (Datton, 00), about the uniform and what it means,

of the National Editorial Staff (Duton, \$22.00), about the uniform and what it means, how to wear it correctly, and in general how to be a good Scout. There are many excellent pictures, of which an unusual number are in

If there is anyone in the audience who ever saw real Italian marionettes, the lifelike puppets that perform like actors, he knows that they play a tremendously long play that takes some three years, one long scene a night, to act all the way through; it is about the knights of Charlemagne and their thrilling adventures, and Sicilians sit entranced night after night, following the story. It is told, without mention of the marionettes, but with any number of cond nictures. in KNIGHTS OF CHARLEMAGNIS, tion of the marionettes, but with any number of good pictures, in KNIGHTS OF CHARLEMAGNE, by Ula W. Echols (Longmans, \$3.00), one of the best adventure books of romantic history that I have lately seen. This is more romance than history, of course, but Roland and Oliver, the sorcerer Malagigi, the fair warrior Bradamante and the winged horse, the Hippogriff, have become part of the world's beliefs, whether they ever happened or not, and this is a pleasant way for an American reader to meet them. Indeed it is the only was I ever met them all together it is the only way I ever met them all together

book describes all the many varieties that have been de-veloped in the United States and elsewhere. Notes are added on pho-tography from kites, on parakites, on para-chutes, time re-leases, and other matters of interest. For a gift or for your own use, there are few better books on simple construc-tion than this.







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SHORT STORY WRITING ng and marketing of the copy of THE WRITER



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By Priscilla Holton

Bubbles

ILLUSTRATED BY C. E. B. BERNARD

HE gate of the Earth was closed for the night. That is, it was supposed to be! As a matter of fact, the little gate elf was lazy. Slamming it shut very carelessly, he deliberately turned his back as it swung open again.

"It's only a crack, anyway," he said.
"Nobody'll notice that."

But the Rainbow fairies did! They were

dancing one last time across their painted bow in the Sky. At the opposite end, the Moon held tight to the ribbon chain which kept them from venturing too far. One sharp-eyed dancer, at the very edge of the Sky saw that open crack. "Oh, of the Sky, saw that open crack. "Oh, look, look!" she cried. "The gate of Earth is still open. Let's slide down and ovisiting."

go visiting."
"It's almost dark," suggested a smaller

'But I'm so tired of dancing across this Sky, sprinkling lights for the stars to pick up. Come on; see, the Moon's drowsing. We can be back before she misses us at all. I dare you!"

Not even the smallest could resist that. Down they all slid, dancing in through the gate as noiselessly and swiftly as Rainbows always dance.

"Let's visit the Leaves first; they're our best friends."

'But they're so proper; they'll be

asleep."
"We'll waken them." The Leaves were almost asleep. Their tree-mother had tucked them into their tree-mother had tucked them into their beds of brown and green. Usually her children were so well behaved that she never had to bother about them, once they were in bed, because they dropped off to sleep instantly. Now, however, at the first rustle and whistle of the Rainbows, they were wide-awake in a minute, peering

out over the edges of their beds.
"It's the Sky children; the Sky children!" they whispered with awe. Of all their playmates, these were the most daring, the most irresistible and fun-loving.
They invented games the quiet and orderly
Leaves never dreamed about. And the
songs they sang were almost too fragile and

"Come down, come down quickly,"
coaxed a Sky elf. "We ran in to see you
before the Moon was wide-awake enough

to see that we were going. Come! We have our pipes for dancing."

They all whirled about on their pointed slippers until the Leaves caught the sound

of laughing bells.

"Oh, dear me," answered a Leaf. "We don't wish to be rude. Only it's past our bedtime, you see. Our mother has put us string-g-g."

in. It's too late to come down. The dew's abroad. Run home to your beds, or she'll catch you and spoil your rose and lavender and silver gowns and rust your

"You see rude to tell us to go home," pouted a wilful Sky fairy, "when we came especially to see you, and dared the gate. Come on, Sky children, we'll go see the kind Caterpillars. They'll be glad to play with w."

She knew how angry that would make the Leaves. They hated the Caterpillars, with their sharp teeth and their warm fuzzy coats.

r a few minutes there was silence "They have gone," murmured a Leaf.
"They have gone," murmured a Leaf.
"I'm almost sorry we didn't go down for a
minute at least. It will be all over the Sky
tomorrow what 'fraid cats we were!"

BUT the Rainbows were still there, just the same. They had gathered around the naughtiest elf in all the Earth and Sky. He had been flitting about everywhere, all day long, looking for mischief. When he saw the Sky children dancing through the gate he followed close behind. Here was his chance! He'd start something.
"Sh" he whisprend soffly to the Raine.

"Sh," he whispered softly to the Rainbows, "I'll tell you how to make them come down. Listen to me!" He began to come down. Listen to me!" He began to sing a taunting song that made the Rainbows forget the Leaves were their friends. They learned it exactly as the Spirit of Mischief wished. The poor Leaves were really settling down to sleep when they were disturbed again. From below them came the teasing note of a fairy flute and the laughing voices of the Sky children, as they chanted:

Here Is the Answer to Last Month's Puzzle

scheme came to her mind. She sat down by her magic window to think a bit harder. Suddenly in the distance she heard the distance

Leaves can only dance and swing, Tied to Mother's apron-

string; So they are afraid to try To follow us across the Sky.

Leaves can only dance and swing, Tied to Mother's apron-

Over and over, so shrill and clear that *cause his favorite sport was to sit near the the Leaves thought the whole Earth was water and blow bubbles from a slender listening and laughing at them. Finally, with an angry cry they started off after their tormentors. The Rainbows were so listening and laughing at them. Finally, with an angry cry they started off after their tormentors. The Rainbows were so startled and afraid at the ripping noise that

The Queen found the Blower of Bubbles leaning against a birch-tree, pipe in hand. He was singing so happily that the Queen sank to the ground beside him, not wishing to interrupt

startled and afraid at the ripping noise that they forgot this was supposed to be a joke. "The dew-fairies, the dew-fairies, and the wind!" cried one crimson Sky child. "To the gate! Fly, fly!" Dancing faster than the rest, she led the way. All the Sky children followed. To be safe in their beds now was their only thought.

The Leaves were just as quick. They whirled after the Rainbows. Before the last bright purple sprite could slam the

last bright purple sprite could slam the gate shut, the Leaves swirled through. Soon the Sky was black with Leaves whirling pell-mell across it after the Rainbows.

ing pell-mell across it after the Rainbows.
Such confusion followed! All that night
and the next day those silly children
chased the others. A glorious lark for
them—until they began to get tired. The
Rainbows knew all the secret hiding places
of the Sky. Besides, the slippery paths
didn't bother them; so they kept far
enough ahead of the Leaves to make them
beet bless.

At last the Fairy Queen realized that something must be done to bring the Leaves home. But try as she would no scheme came to her mind. She sat down by her magic window to think a bit harder.

what to do; he always knows.

Immediately she summoned her dainty char-iot and directed it to-ward the Pool of Laughter. In the very center of her realm (so center of her realm (so exact that few can find it) lived the kindliest, wisest, best-beloved fairy in all the world. He was called the Blower of Bubbles, be-

LEAVING her chariot at the edge of the wood, the Queen walked in toward the Pool of Laughter. There she found the Blower of Bubbles leaning against a birchtree, pipe in hand. He was singing so happily that the Queen sank to the ground beside him, not wishing to interrupt. But he turned quickly, hearing her first sigh.

sigh.

"Ah, my lady Queen," he bowed, as soon as he had caught his breath, "you do me honor, coming so late in the day to the Pool of Laughter. Shall the ripples dance for you, or will you see pictures from my pipe?"
"I should love both," she answered wistfully, "but it is for your advice I have

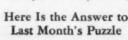
while the Queen told her story, the Blower of Bubbles grew so interested that he quite forgot to stop blowing on his first bubble! It grew larger and rounder and softer and fluffier. Occasionally he wanted to laugh at some part of the tale, and that made him blow more strenuously than ever. When the story was ended, the bubble had grown out of bounds. Its maker gasped with astonishment when he noticed it.

Up into the air it sailed, higher and

he noticed it.

Up into the air it sailed, higher and higher, softer and softer, fluffier and fluffier. The trees began to wave about excitedly. Still it rose up, up, up! The tired children saw it coming. When it finally bumped across their path, they sank down to rest behind it in a tousled heap of torn Leaves and faded Rainbows. The Earth became quiet and peaceful again. Peace was restored.

Even now at times the Rainbows run Even now at times the Rainbows run away from home and the Leaves still chase after them at the word apron strings, but the Blower of Bubbles knows how to bring them home again when they go racing off across the Sky. When you look up you may see his fleecy bubbles yourself. People call them clouds—but then, they have never visited the center of the earth with its Peopl of Laughter and its Blower of with its Pool of Laughter and its Blower of Bubbles.





FANTASTIC SCENERY PACKET ontains all different stamps of far-away countries de-teining wonderful thrilling scenes. Included are: Belgium stam with pitchfork); Barbadoes (charlot and flying orese); Chile (battle scene); Egypt (aphinx and pyra-nicia); Jugoslavia (nude slave breaking chain); New-undiand (wild carbbou) Malay (ferecious tigen; Timidad (Goldoss (Victory); Tanis (fightime Arab); and others. To approval appli-tus enciosing for this great packet will be seat. **Rea** pic-ter tright now, we will also include free a triangle stamp perforation suge, and a camal package of hinges.



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STAMPS TO STICK &

A DEPARTMENT FOR STAMP ENTHUSIASTS OF ALL AGES

AT WASHINGTON

HEN a new postmaster-general takes office the country's philatelists immediately begin to speculate as to what his attitude is going to be toward their hobby. Will he be indifferent to it? Will he

what his attitude is going to be will he favor or frown upon the issuing of commemoratives? Will he get out a new general series? Fortunately for stamp collecting, the new incumbent, Walter F. Brown, retained as one of his assistants Warren Irving Glover, who was in the Post Office Department during the Presidential administrations of Harding and Coolidge. Mr. Glover has the friendliest feelings toward philately. He is constantly extending official aid, in various ways, to collectors. It was he who originated the idea of the Philatelic Agency, a government bureau which during the past fiscal year sold more than \$200,000 worth of unused U. S. stamps to collectors and dealers all over the worldstamps most of which will go into albums, and stamps most of which will go into albums, and therefore Uncle Sam will never have to provide therefore Uncle Sam will never have to provide any postal service in return for the money paid for them. And it is Mr. Glover who is re-sponsible for the department policy of preparing special postmarks and cachets for first-day flight covers as the various air routes are opened. From what has transpired since Mr. Brown entered President Hoover's cabinet in March it is to be suspected that the Postmaster-General col-lected as a low. Philarchy does not know, but

lected as a boy. Philately does not know, but it felt that its conjecture had been confirmed when some weeks ago Mr. Brown in a radio talk requested that suggestions be sent to the Post Office Department for designs for a new U. S. series to replace the current issue—a new series which would "possess genuine, artistic merit" and be "based upon some well-considered scheme," possibly one symbolizing our national

history.

Not long after he had spoken on the air Mr.
Brown gave philatelists two more surprises in quick succession, by announcing that two U. S. commemoratives would appear shortly.

One of these was placed on sale June 5, a 2-cent



his portrait the reign of Czar Simeon (left) a thousand years ago. At the right is Czar Alexander II of Russia, who aided in Bul-garia's liberation from Turkey in 1878

session of Congress for the issuing of Pulaski, Nashville and Mount of the Holy Cross stamps, as told in the July Companion, have been supplemented by a fourth, offered by Representative Charles A. Eaton, New Jersey, who would have the Postmaster-General put forth a 2-cent to recall the 250th anniversary of the founding of Trenton, N. J., on October 27, 1679.

And Senator Phipps of Colorado has asked the Post Office Department that Pikes Peak in his state be illustrated on a stamp.

STAMP NEWS

Two Casars

COMING unheralded from Italy is a series which commemorates the recent anniversary of the building of Rome and also the march of the Black Shirts seven years ago, and these stamps bring us two faces new to philatelic por-

traiture.
On the 73/2-centesimi, violet, 20-centesimi, carmine, and 20-lire, light green, is a likeness of Caius Julius Cæsar, Roman general, statesman, writer, and bane of American high-school days.
On the 10-centesimi, sepia, and 1-lira 75-centesimi, vermilion, appears the first Roman Emperor, Caius Julius Cæsar Octavianus, [called the Emperor Augustus.]
The other fourteen denominations have

denominations have each one of four designs
— a full - faced and tower-crowned head red, which, as the official notification to postmasters said, recalls "the first incandescent lamp invented by Thomas Alva Edison." The central design is a picture of the original lamping to the ori

BULGARIA recently devoted six days to feativities which recalled, first, the reign of Czar Simeon, who a thousand years ago united his people in a brilliant reign long before deliverance from the Turkish yoke, and, second, the lifting of that yoke in 1878. The two events were to have been celebrated last year, but an earthquake caused the Balkan nation to go into mourning instead.

Deferred also was the issuing of commemo-

mourning instead.

Deferred also was the issuing of commemorative stamps, which have only now appeared. One design presents the head of Simeon and bears the dates 893 and 927, the span of his reign, and 927 and 1927, the thousand years following his death. Another shows Czar Alexander II of Russia, who was identified with Bulgaria's liberation from Turkey.

U. P. U.

THE international organization on mail arrangements, known as the Universal Postal Union, of which nearly every civilized country is a member, held its congress in London, in May. It meets every four years.

Great Britain followed the example set by Spain, Sweden and other lands in which these conferences have taken place, and put

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masters said, recalls "the fiftieth anniversary of the production of the first incandescent lamp invented by Thomas Alva Edison." The central design is a picture of the original lamp, with rays issuing from it. Above and partly encircling the lamp is a ribbon with the words "Edison's First Lamp." Through the rays is the inscription "Electric Light's Golden Jubilee." The dates 1879 and 1929 are inscribed.

The other commemorative, also a 2-cent red. commemorates "the 150th anniversary of the Sullivan expedition in New York State during the Revolutionary War" and was placed on sale on June 17. Sullivan defeated the Iroquois Indians and their Loyalist allies at Newtown, now Elmira, N. Y., on August 29, 1779. The central design of the stamp presents a three-fourths length portrait of Major-General Sullivan in Continental uniform, and his military title and name are inscribed in a ribbon panel below. The stamp carries the dates 1779 and 1929, and "Sullivan Expedition" appears across the top.

In recent years most of Uncle Sam's special adhesives have commemorated Revolutionary War events, and much criticism has been expressed in England. The Edison stamp, therefore, is welcomed by philatelists—particularly by those who have long been advocating that our government honor postally our nation's engineers, scientists, inventors and writers of the past.

Portraits of living men have never appeared on U. S. adhesives, and only three Americans have had their achievements recalled philatelicly before they died. One is Orville Wright, airplane inventor; the first successful machine of the Wright brothers was pictured on a stamp last December. Another is Charles A. Lindbergh, who flew the past to glory when he hopped to Paris. The third is Edison.

December. Another is Charles A. Lindbergh, have taken place, and put forth commemorative stamps in five values—Paris. The third is Edison.

Meanwhile the bills introduced at the extra

Who pays for advertising?



\$175,175,378

THAT'S a lot of money. It isn't the national debt—but what is it, and who paid it?

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Are you paying for advertising that should cost you nothing? We hope not. More and more, national advertisers are paying youth the compliment of realizing that what youth wants it is bound to get—and that it is good business to advertise in young people's magazines because a friend made in youth is usually a friend for life. Don't overlook the service the advertiser offers you. Find out more about him and his product. You may be sure that he is honest and his product is worthy. No one would dare advertise a shoddy product to the keen-eyed youth of today.

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AN ATLANTIC MONTHLY PUBLICATION EIGHT ARLINGTON STREET, BOSTON

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THINGS WE TALK ABOUT

AGAZINE offices are peculiar places. For the readers of this page, summer is at its height. Never so much fishing, more sets of tennis, finer boating, power or sail, or warmer swimming. But for The Companion editors the summer is over, and the first frost is due any moment.

due any moment.

For editors must live in the future, and in THE

For editors must live in the future, and in The Companion office all our thoughts are now devoted toward giving you the best fall issues of a young people's magazine that you have ever read. Your always welcome friend, Carl H. Claudy, will return to The Companion with a long story complete in the September number. Remember Pat Prenties's Fortune? This new long story called The MILLIONAIRE SOB SISTER is a sequel to that—and you will find in it the same breathless excitement that made Pat Prenties's Fortune. that—and you will find in it the same breathless excitement that made Pat Parntins's Fortung the finest story of newspaper life ever published in a young people's magazine. Kidnappers, gangsters, a sinister political machine out to run the city for its own wicked ends and stopping at nothing to dispose of those who stand in its way—these are just a few of the enemies that Pat Prentiss meets, and conquers. But victory does not come until Pat has risked not only her fortune but her life. And the climax—it will bring a lump to your throat, we promise. a lump to your throat, we promise.

KARL W. DETZER is another author who will return again in the fall. He will follow his extraordinarily popular story, The Weaver Name, which ran in July, with another equally exciting tale, this time of shipwreck and heroism on the shores of Lake Michigan. Watch for it in October.

Seldom has The Companion published a serial

of greater popularity than RANDOLPH, SECRET AGENT, by Keith Kingsbury. You will be sorry to see it end, we know. But the serlal which follows it will just as swiftly get a grip on your imagination. Imagine a group of men, including a lieutenant and a chief boatswain's mate in the United States Navy, embarking in a specially constructed submarine to reach the North Pole under the forty feet of ice which sheathes the Arctic seas—the entire party in command of a sinister figure, Professor Van Dusen, at times a genius, at times a madman. That is the breathless plot of the serial by Fitzhugh Green which will begin in October. Not since Jules Verne wrote "Twenty Thousand Leagues Under the Sea" has any writer brought such a rich imagination and such real ability to the writing of fiction for youth. And Fitzhugh Green is no armchair author. He himself has been an illustrious Arctic explorer, and he is in close touch with Sir Hubert Wilkins, who actually plans to travel under the Arctic ice in a submarine in the summer of 1930. The Adventures of the Submarine Persoun will be all the more thrilling to you when you realize that they are founded on fact.

MORE and even better articles for the fall, too. Samuel Scoville, Jr., the famous naturalist, will write for you of his amusing and thrilling adventures in the wilds. Dr. E. E. Free will give adventures in the wilds. Dr. E. E. Free will give you some fascinating articles on modern science. Earl Reeves, Paul Leach and many other illustrious contributors will round out The Companion's fall pages as never before.

Short stories and departments—just wait until

you see them.

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THE YOUTH'S COMPANION

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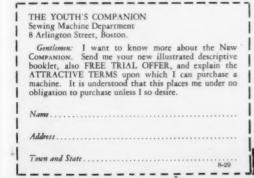


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